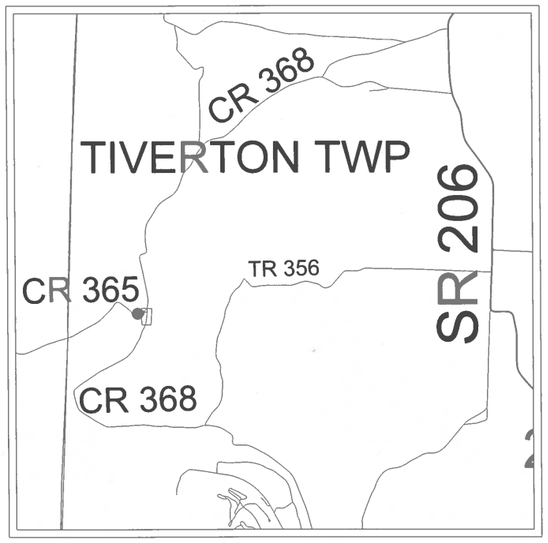
COSHOCTON COUNTY
ENGINEER'S OFFICE

COS-CR 365-00.08

COSHOCTON COUNTY



LOCATION MAP

LATITUDE: N 40° 24' 45" LONGITUDE: W 82° 10' 43"

0 1 2 Miles

N

LOCATION TO BE IMPROVED _____

STATE ROUTES _____

OTHER ROADS _____

DESIGN DESIGNATION

CURRENT ADT (2017)_____230
DESIGN YEAR ADT (2036)_____270

DESIGN HOURLY VOLUME (2036)___30
DIRECTIONAL DISTRIBUTION_____53%
TRUCKS (24 HOUR B&C)_____6.00%
DESIGN SPEED_____35 MPH
LEGAL SPEED_____35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL LOCAL ROAD
NHS PROJECT_____NO

DESIGN EXCEPTIONS

NONE

OHIO811.org Before You Dig

INDEX OF SHEETS:

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PROJECT DESCRIPTION

IMPROVEMENT OF 0.08 MILES OF CR 365 IN TIVERTON TOWNSHIP BY REPLACING A 2-SPAN BRIDGE OVER THE MOHICAN RIVER WITH A SINGLE SPAN STEEL TRUSS BRIDGE INCLUDING GUARDRAIL AND MINIMAL APPROACH ROADWAY WORK.

PROJECT EARTH DISTURBED AREA = 0.51 ACRES

ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.15 ACRES

NOTICE OF INTENT EARTH DISTURBED AREA = N/A

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Dane R Thrapp 4-30-2025
COSHOCTON COUNTY COMMISSIONER DATE

4-30-2025
COSHOCTON COUNTY COMMISSIONER DATE

4-30-2025
COSHOCTON COUNTY COMMISSIONER DATE

4/29/25
COSHOCTON COUNTY ENGINEER DATE

THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF

ENGINEER'S SEAL

STATE OF OHIO
JOSHUA KEMPF
E-88533
REGISTERED PROFESSIONAL ENGINEER
2025

SIGNED: Joshua Kempf
DATE: 4/29/25

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-3.1	1-19-24	MT-101.60	4/21/23		800	1-17-25	ASBESTOS SURVEY
		MT-105.10	1/17/20		832	7-21-23	REPORT
DM-4.3	1-15-16						5-26-21
DM-4.4	1-15-16	TC-41.20	10/18/13				
		TC-42.20	10/18/13				
MGS-1.1	7-16-21	TC-52.10	10/18/13				
MGS-2.1	1-19-18	TC-52.20	1/15/21				
MGS-3.1	1-19-18						
MGS-4.2	7-19-13						
DS-1-92	7-15-22						
EXJ-4-87	1-19-24						
GSD-1-19	1-15-21						
TST-1-99	3-19-02						

PLANS PREPARED BY COSHOCTON COUNTY ENGINEER'S OFFICE

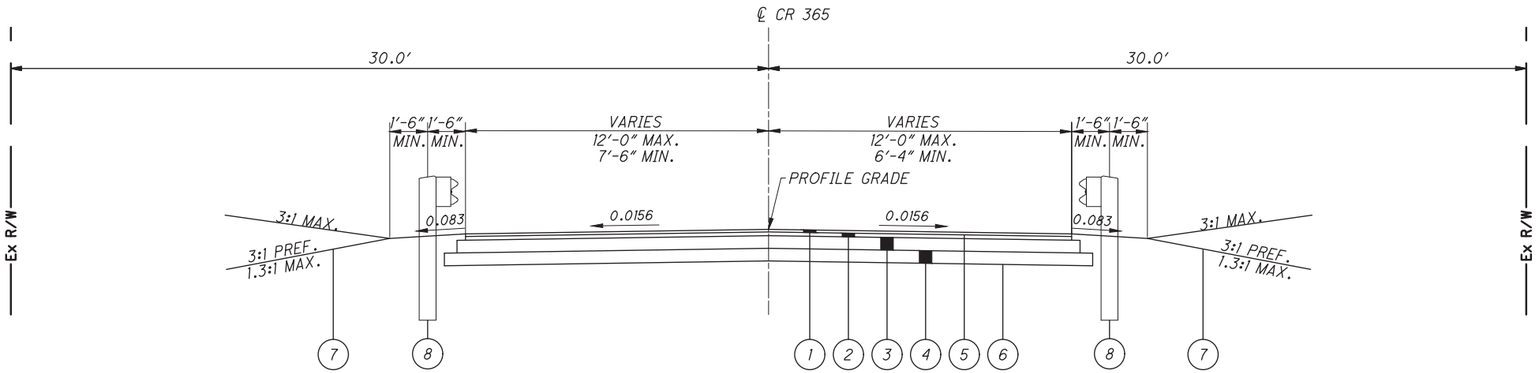
FEDERAL PROJECT NO. E240305

PID NO. 108777

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

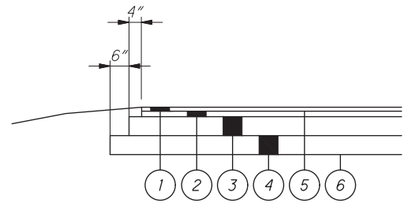
COS-CR 365-00.08



C.R. 365

STA. 107+10.00 TO STA. 107+81.64
STA. 110+00.64 TO STA. 110+90.94

ITEM	DESCRIPTION
1	441 ~ 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
2	441 ~ 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
3	301 ~ 6" ASPHALT CONCRETE BASE, PG64-22
4	304 ~ 6" AGGREGATE BASE
5	407 ~ TACK COAT (@ 0.05 GAL/SY)
6	204 ~ SUBGRADE COMPACTION
7	659 ~ SEEDING AND MULCHING, CLASS 3B
8	606 ~ GUARDRAIL, TYPE MGS



STEP DETAIL

CALCULATED JDK
CHECKED FTW

TYPICAL SECTION

COS-CR 365-00.08

CALCULATED JDK CHECKED

GENERAL NOTES

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN OR ADJACENT TO THE PROJECT CONSTRUCTION LIMITS, TOGETHER WITH THEIR RESPECTIVE OWNERS:

OHIO CUMBERLAND GAS
20718 CUMBERLAND GAS COMPANY
CONTACT: AUSTIN STRITMATTER, ENGINEERING
PHONE: 740-392-2941
EMAIL: ASTRITMATTER@OHIOCUMBERLANDGAS.COM

BRIGHTSPEED FIBER
2025 AKRON ROAD
WOOSTER, OHIO, 44691
CONTACT: JEFF SCHOONOVER
PHONE: 740-263-2819,
ALT. PHONE: 330-262-1128
EMAIL: JEFFERY.L.SCHOONOVER@BRIGHTSPEED.COM
ALT. EMAIL: RELOCATIONS@BRIGHTSPEED.COM

FRONTIER POWER COMPANY
770 SOUNTH SECOND STREET
P.O. BOX 280
COSHOCTON, OHIO 43812
CONTACT: KYLE CRAMBLETT
PHONE: 740-622-6755
EMAIL: KCRAMBLETT@FRONTIER-POWER.COM

THE ENERGY COOPERATIVE (FOR NATURAL GAS)
120 O'NEILL DRIVE, HEBRON, OH 43025
CONTACT: CHRIS STORTS, ASSOCIATE ENGINEER
MOBILE PHONE: 740-485-4898
EMAIL: CSTORTS@THEENERGYCOOP.COM

CALL OHIO UTILITIES PROTECTION SERVICE TWO (2) WORKING DAYS BEFORE YOU DIG, TOLL FREE NO. 1-800-362-2764 (NON-MEMBERS MUST BE CALLED DIRECTLY). ALL EXPENSES INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORE BY THE UTILITY OWNERS.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NADV88.

EXISTING PLANS

EXISTING PLANS ARE AVAILABLE UPON REQUEST AT THE COSHOCTON COUNTY ENGINEER'S OFFICE, 740-622-2135.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

CONTRACTOR'S USE OF RIGHT-OF-WAY

THE CONTRACTOR SHALL NOT USE OR ENTER ANY AREA OUTSIDE OF THE RIGHT-OF-WAY LIMITS THAT ARE SHOWN ON THE PLANS.

NO IN STREAM WORK

NO WORK SHALL TAKE PLACE BELOW THE ORDINARY HIGH-WATER MARK (OHWM) OF THE MOHICAN RIVER. SHOULD WORK BELOW THE OHWM ELEVATION OF 847.34 NEED TO TAKE PLACE, THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING THEIR OWN WATERWAY PERMIT FROM THE HUNTINGTON OFFICE OF THE US ARMY CORPS OF ENGINEERS.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED WITHIN 72 HOURS.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SEEDING AND MULCHING	278 SQ. YD.
659, COMMERCIAL FERTILIZER	0.04 TON
659, LIME	0.06 ACRES
659, WATER	2 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

EDANGERED BAT HABITAT

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

INSPECTION FOR BATS AND NESTING BIRDS

INSPECTION FOR BATS AND NESTING BIRDS PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS OR NESTING BIRDS. IF ANY BATS OR BIRD NESTS ARE OBSERVED THE CONTRACTOR SHALL NOTIFY NICOLE HAFER-LIPSTREU IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5103 (NICOLE.HAFERLIPSTREU@DOT.OHIO.GOV), OR, BRIAN TATMAN @ (740) 323-5191 (BRIAN.TATMAN@DOT.OHIO.GOV) PRIOR TO STARTING ANY DEMOLITION WORK.

MOHAWK DAM FLOWAGE EASEMENT

NO STORAGE OF MATERIALS OR STAGING SHALL OCCUR WITHIN THE FLOWAGE EASEMENT OF MOHAWK DAM DURING TIMES OF RISING POOL ELEVATION. NO BUOYANT ITEMS SHALL BE LOCATED WITHIN THE FLOWAGE EASEMENT I.E. FUEL TANKS, JOB SITE TRAILERS, TRASH, ETC.

MOHAWK DAM WATER LEVELS CAN BE MONITORED AT https://www.lrh-wc.usace.army.mil/wm/?basin/mus/mkw

CONTRACTOR SHALL EVACUATE EQUIPMENT AND MATERIALS FROM THE FLOWAGE EASEMENT TO A SECONDARY STAGING AREA OUTSIDE OF EASEMENT LIMITS WHEN DAM WATER LEVELS REACH 835'.

THE UNITED STATES ARMY CORPS OF ENGINEERS, ODOT AND THE COSHOCTON COUNTY ENGINEER'S OFFICE SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES OR DELAYS AS A RESULT OF OPERATION OF THE DAM.

DESCRIPTION OF DEMOLITION PROCESS

FALSEWORK SHALL BE PROVIDED DURING DEMOLITION PROCESS TO PREVENT DEBRIS FROM FALLING INTO RIVER. A DESCRIPTION OF DEMOLITION PROCESS WILL BE PROVIDED TO SCENIC RIVER MANAGER PRIOR TO CONSTRUCTION.

RIVER SIGNAGE

THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNAGE/MARKERS 300 FEET UPSTREAM AND 300 FEET DOWNSTREAM OF THE PROJECT AREA TO ALERT USERS OF CONSTRUCTION ACTIVITIES AND ACCESS RESTRICTIONS ON THE MOHICAN RIVER. THE CONTRACTOR SHALL ALSO PLACE SIGNAGE AT THE UPSTREAM ACCESS (MILLERSBURG RD/US-62 IN BRINKHAVEN, KNOX COUNTY) AND DOWNSTREAM ACCESS (TR 364) TO ALERT PADDLERS/BOATERS OF ACCESS RESTRICTIONS AND DIRECT USERS TO SECONDARY ACCESS POINTS, IF NEEDED. ACCESS RESTRICTIONS WILL BE LESS THAN THE TIME NEEDED FOR OVERALL PROJECT CONSTRUCTION AND WILL OCCUR WHEN CONSTRUCTION ACTIVITIES ARE DEEMED UNSAFE FOR PADDLERS/BOATERS.

OEPA NOTIFICATION OF DEMOLITION AND RENOVATION

AN ASBESTOS SURVEY FOR THE COS-CR365-0.08 BRIDGE SCHEDULED FOR DEMOLITION WORK WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. A COPY OF THE ASBESTOS SURVEY REPORT FOR THE BRIDGE HAS BEEN INCLUDED IN THE PLAN PACKAGE FOR THIS PROJECT. THE ASBESTOS SURVEY REPORT DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED BY THE ASBESTOS HAZARD EVALUATION SPECIALIST, HAS BEEN INCLUDED AT THE END OF THE ASBESTOS SURVEY REPORT. THE CONTRACTOR SHALL COMPLETE THE NECESSARY SECTIONS OF THE FORM AND SUBMIT IT WITH A COPY OF THE ASBESTOS SURVEY REPORT TO:

ASBESTOS PROGRAM
OHIO EPA, DAPC
PO BOX 1049
COLUMBUS OH 43216-1049

AT LEAST 10 WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION WORK. NOTIFICATION CAN BE MADE EITHER BY HARD COPY OR ELECTRONICALLY. ADDITIONAL INFORMATION CAN BE FOUND HERE:
http://epa.ohio.gov/dapc/atu/asbestos.aspx#179575188-project-notification

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENTS FOR THIS WORK SHALL BE INCIDENTAL TO THE ITEM 202 STRUCTURE REMOVAL ITEM(S) IN THE PLAN.

ON-THE-WATER LAW ENFORCEMENT

IF ON-THE-WATER LAW ENFORCEMENT ASSISTANCE IS NEEDED OR IF ANY QUESTIONS REGARDING NAVIGATION ARISE, THE ODOT PROJECT ENGINEER SHALL CONTACT THE ODNR DIVISION OF PARKS AND WATERCRAFT LAW ENFORCEMENT SUPERVISOR, DAWN ROBERTS VIA EMAIL OR TELEPHONE (DAWN.ROBERTS@DNR.OHIO.GOV OR 614-813-2505).

ODNR SCENIC RIVERS COORDINATION

THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODNR AT HEATHER.DOHERTY@DNR.OHIO.GOV, AND ODOT PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND PROVIDE REGULAR UPDATES THROUGHOUT CONSTRUCTION.

TOXIC OR HAZARDOUS MATERIALS

THE CONTRACTOR SHALL NOT DISCHARGE TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND TO A SCENIC RIVER, ITS TRIBUTARIES, OR DRAINAGE WAYS. IF REFUELING OF IMMOBILE EQUIPMENT IS NECESSARY WITHIN THE FLOODPLAIN OR NEAR ANY, TRIBUTARY DRAINAGE WAYS, DITCHES, OR STREAM, THE CONTRACTOR SHALL PROVIDE SECONDARY CONTAINMENT WITH ENOUGH CAPACITY TO COMPLETELY CONTAIN AND COLLECT ALL POTENTIAL LIQUID WASTES IN THE EVENT OF A SPILL.

DEBRIS AND MATERIAL DISPOSAL

ANY AND ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, AND TRASH SHOULD BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LAND FILL ABOVE FEMA 100-YEAR FLOOD ELEVATIONS. DISPOSAL OF ANY SUCH MATERIALS WITHIN 1000 FEET OF THE MOHICAN RIVER OR INSIDE OF THE MOHAWK FLOWAGE EASEMENT IS PROHIBITED.

ORC 3750.06, REPORTABLE SPILLS

IN ACCORDANCE WITH ORC 3750.06, REPORTABLE SPILLS MUST BE REPORTED TO THE LOCAL FIRE DEPARTMENT (911), THE LOCAL EMERGENCY COORDINATOR, AND THE OHIO SPILL LINE (1-800-282-9378).

IDLE EQUIPMENT AND STORAGE

THE CONTRACTOR SHALL KEEP ALL IDLE EQUIPMENT, FUELS, LUBRICANTS, AND ANY STORAGE FOR/OF POTENTIALLY TOXIC OR HAZARDOUS MATERIALS OUT OF THE FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA AND NOT WITHIN 1000 FEET OF THE MOHICAN RIVER OR WITHIN MOHAWK FLOWAGE EASEMENT.

PROJECT ENGINEER NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER 40 DAYS PRIOR TO WORK WITHIN THE 1000 FEET OF THE MOHICAN RIVER. THE PROJECT ENGINEER SHALL NOTIFY THE DISTRICT ENVIRONMENTAL COORDINATOR 35 DAYS PRIOR TO WORK WITHIN 1000 FEET OF THE MOHICAN RIVER. THE DISTRICT ENVIRONMENTAL COORDINATOR SHALL COORDINATE WITH ODNR SCENIC RIVERS A MINIMUM OF 30 DAYS PRIOR TO ANY WORK WITHIN 1000 FEET OF THE MOHICAN RIVER.

SWPPP

THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SEDIMENT AND EROSION CONTROL PLAN BEFORE EARTHWORK COMMENCES. THE PLAN SHALL INCLUDE A LIST OF APPLICABLE BMP'S PER SS 832 THAT WILL BE USED THROUGHOUT THE PROJECT, SUCH AS PERIMETER CONTROLS AND/OR SEEDING AND MULCHING, AND MUST BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND ACCEPTANCE. SEDIMENT AND EROSION CONTROLS SHALL BE PROPERLY INSTALLED AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF SEDIMENT CONTROL. ALL TEMPORARY SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA. PARTICULAR ATTENTION SHALL BE GIVEN TO ANY DRAINAGE WAYS, UNPROTECTED SLOPES, DITCHES, AND STREAMS THAT COULD CONVEY SEDIMENT LADEN WATER DIRECTLY TO THE MOHICAN RIVER.

PAINTING, WELDING, SAND AND/OR WATER BLASTING

IF ANY PAINTING, WELDING, SAND AND/OR WATER BLASTING (CLEANING) AT OR OVER THE MOHICAN RIVER THEN THE CONTRACTOR SHALL UTILIZE APPROPRIATE APRONS TO PROVIDE COMPLETE CONTAINMENT OF ALL PAINT, WELDING SLAG, AND/OR SEALANT OVER SPRAY AND OTHER DEBRIS. APRONS, APPROPRIATE FALSEWORK, OR OTHER BARRIERS SHALL BE UTILIZED ON ALL DECK REPLACEMENT PROJECTS TO PREVENT THE DISCHARGE OF CONCRETE, ASPHALT, OR OTHER DEBRIS TO THE MOHICAN RIVER. ALL DEBRIS COLLECTED SHALL BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LAND FILL ABOVE FEMA 100-YEAR FLOOD ELEVATIONS. DISPOSAL OF ANY SUCH MATERIALS WITHIN 1000 FEET OF THE MOHICAN RIVER IS PROHIBITED.

RIVER BANK VEGETATION DISTURBANCE

THE CONTRACTOR MUST MAKE ALL REASONABLE ATTEMPTS TO DISTURB THE MINIMUM AMOUNT OF RIVER BANK VEGETATION. DISTURBED STREAM BANKS SHALL BE RE-VEGETATED, RETURNED TO PREVIOUSLY EXISTING CONTOURS AND ELEVATIONS, AND ANY TREES REMOVED TO PERFORM THE WORK SHALL BE REPLACED WITH NATIVE TREE SPECIES, WHERE PHYSICALLY PRACTICABLE. NATIVE TREE SPECIES AS SPECIFIED IN THE PLANS SHALL BE PLANTED AT A DENSITY OF 400 TREES PER ACRE WITH A SPACING OF APPROX. 10 FEET ON CENTER. SEEDING AND/OR MULCHING MUST OCCIR IMMEDIATELY FOLLOWING PROJECT COMPLETION.

ODNR RECREATIONAL BOATING NOTIFICATION

THE PROJECT ENGINEER SHALL NOTIFY ODNR AT KYLA.MAUNZ@DNR.OHIO.GOV, 14 CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO ALLOW ODNR TO POST NOTICE OF IMPENDING PROJECT CONSTRUCTION ON THE APPROPRIATE ODNR WEBPAGES AND ASSOCIATED ONLINE BOATING MAPS. ODNR AT KYLA.MAUNZ@DNR.OHIO.GOV WILL BE NOTIFIED WHEN THE PROJECT IS COMPLETE, AND ALL SIGNAGE HAS BEEN REMOVED.

TEMPORARY MATTING ANCHORING

ALL TEMPORARY MATTING MUST BE SECURELY ANCHORED USING MINIMUM 1/2" CABLE AND ALL MATS MUST HAVE CABLE THROUGH THEM. IF POLY MATS ARE USED THEN ALL CONNECTOR LOCATIONS SHALL BE USED. ANCHORING POINTS CAN BE TREES, DEAD MEN, SHEET PILE, CONCRETE ABUTMENTS ETC. MATS CAN BE REMOVED FROM MOHAWK FLOWAGE EASEMENT EACH DAY IN LIEU OF ANCHORING.

COS-CR 365-00.08

ITEM 614, MAINTAINING TRAFFIC

C.R. 365 SHALL BE CLOSED TO THROUGH TRAFFIC WITHIN THE PROJECT WORK LIMITS STATED FOR A PERIOD NOT TO EXCEED 120 CONSECUTIVE CALENDAR DAYS. THROUGH TRAFFIC WILL BE DETOURED AS SHOWN IN THE PLANS. DISINCENTIVES SHALL BE ASSESSED IN THE AMOUNT OF $1000 PER DAY FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE PROPOSAL COMPLETION DATE.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF THE CONTACT PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY FOUR (24) HOURS PER DAY BY THE COSHOCTON COUNTY ENGINEER, AND ALL INTERESTED LAW ENFORCEMENT AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR WILL ADVISE THE COSHOCTON COUNTY ENGINEER SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

ROAD WILL BE
CLOSED MMM DD
FOR 120 DAYS
OHIO DEPT OF TRANSPORTATION

W20-H14-60

MMM = MONTH (3 LTR.)
DD = DATE (1 OR 2 DIGIT)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES, AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ON C.R. 365 AT STA. 105+00
ON C.R. 365 AT STA. 111+50

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN C.R. 365 DETOUR SIGNS AND SIGN SUPPORTS AS DETAILED IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENEREAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

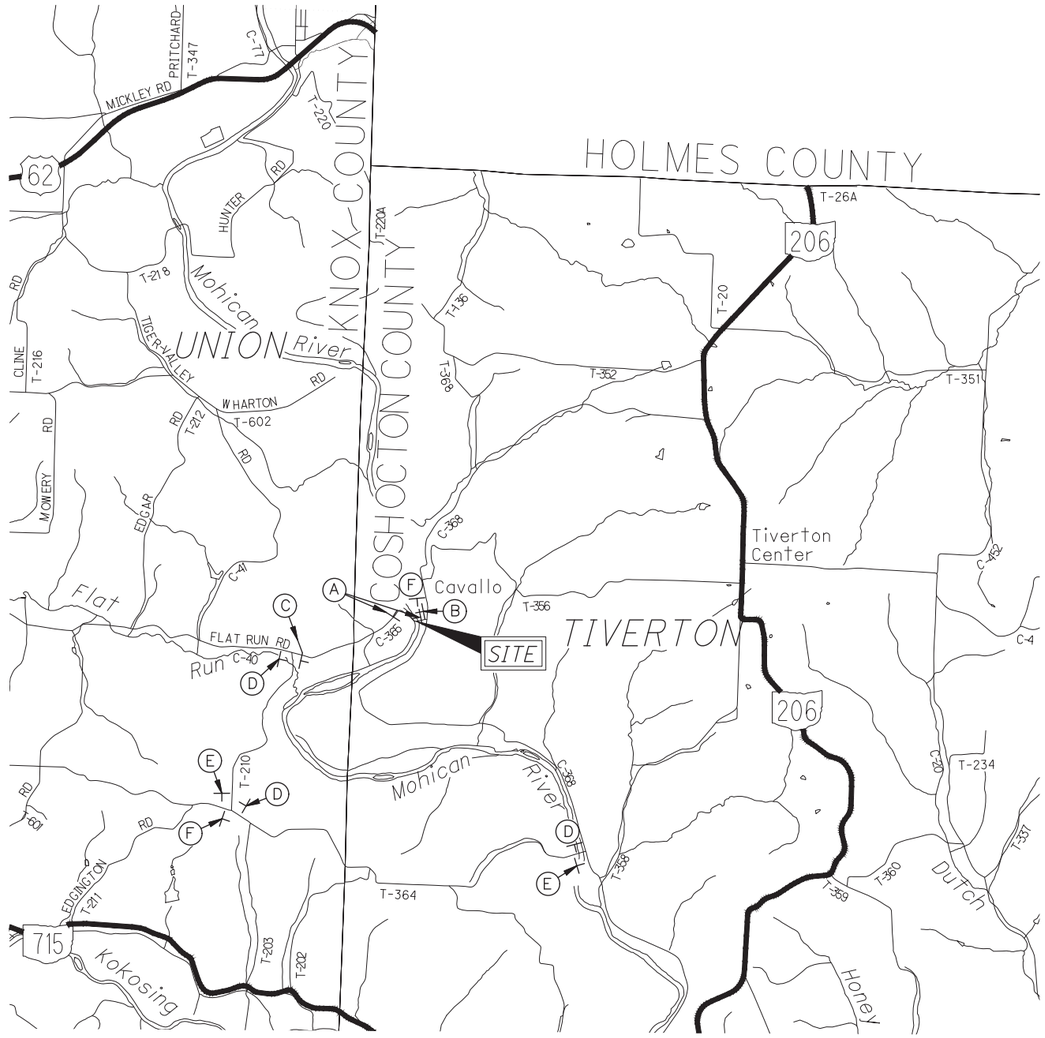
ITEM 614, DETOUR SIGNING, AS PER PLAN LUMP

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

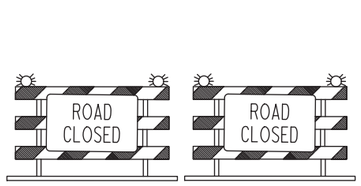
DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 1 M. GAL



COUNTY ROUTE
STATE ROUTE



R11-2-48 R11-2-48

(2) 10' TYPE III SOLID BARRICADE
PER STD. DWG. MT-101.60
PLACED ACROSS BOTH LANES

Ⓐ

R11-3a-60
M4-10-30

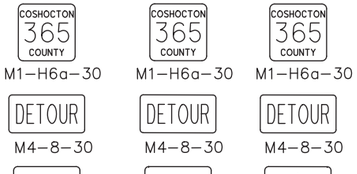
10' TYPE III SOLID BARRICADE
STD. DWG. MT-101.60

Ⓑ

R11-3a-60
M4-10-30

10' TYPE III SOLID BARRICADE
STD. DWG. MT-101.60

Ⓒ



M1-H6a-30 M1-H6a-30 M1-H6a-30
M4-8-30 M4-8-30 M4-8-30
M6-1R-30 M6-1L-30 M6-3-30

Ⓓ Ⓔ Ⓕ

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JDK
CHECKED FTW

DETOUR PLAN - C.R. 365

COS-CR 365-00.08

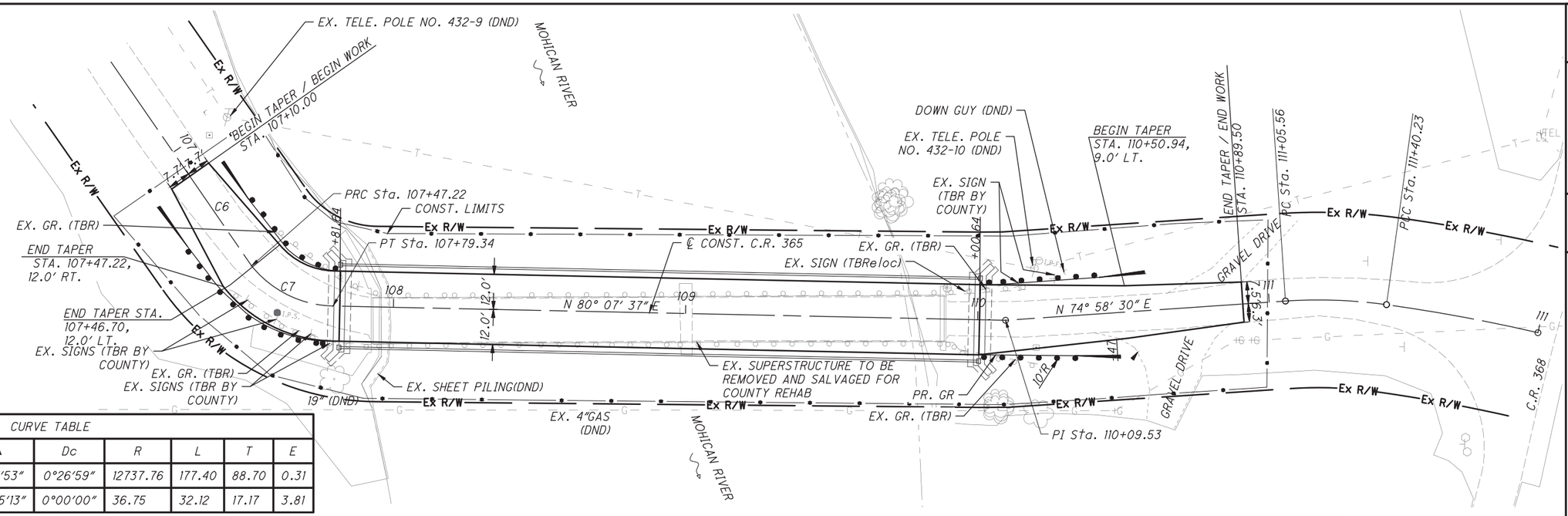
SHEET NUM.	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						ROADWAY	
		201	11000	LS		CLEARING AND GRUBBING	
		202	38000	172	FT	GUARDRAIL REMOVED	
		203	10000	128	CY	EXCAVATION	
		203	20000	127	CY	EMBANKMENT	
		204	10000	362	SY	SUBGRADE COMPACTION	
		606	15050	236	FT	GUARDRAIL, TYPE MGS	
		606	25550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
		606	26550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
		606	35003	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	10
						EROSION CONTROL	
		659	00530	278	SY	SEEDING AND MULCHING, CLASS 3B	
		659	20000	0.04	TON	COMMERCIAL FERTILIZER	
		659	31000	0.06	ACRE	LIME	
		659	35000	3	MGAL	WATER	
		832	30000	10,000	EACH	EROSION CONTROL	
						PAVEMENT	
		301	56000	60	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
		304	20000	60	CY	AGGREGATE BASE	
		407	10000	18	GAL	TACK COAT	
		441	70000	13	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
		441	70300	18	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	
		643	00300	0.06	MILE	CENTER LINE	
						MAINTENANCE OF TRAFFIC	
		614	12421	LS		DETOUR SIGNING, AS PER PLAN	4
						STRUCTURE OVER 20 FOOT SPAN (COS-CR 365-00.08)	
						FOR BRIDGE ESTIMATED QUANTITIES SEE SHEET 13	
						INCIDENTALS	
		614	11000	LS		MAINTAINING TRAFFIC	
		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
		624	10000	LS		MOBILIZATION	

CALCULATED JDK
CHECKED FTW

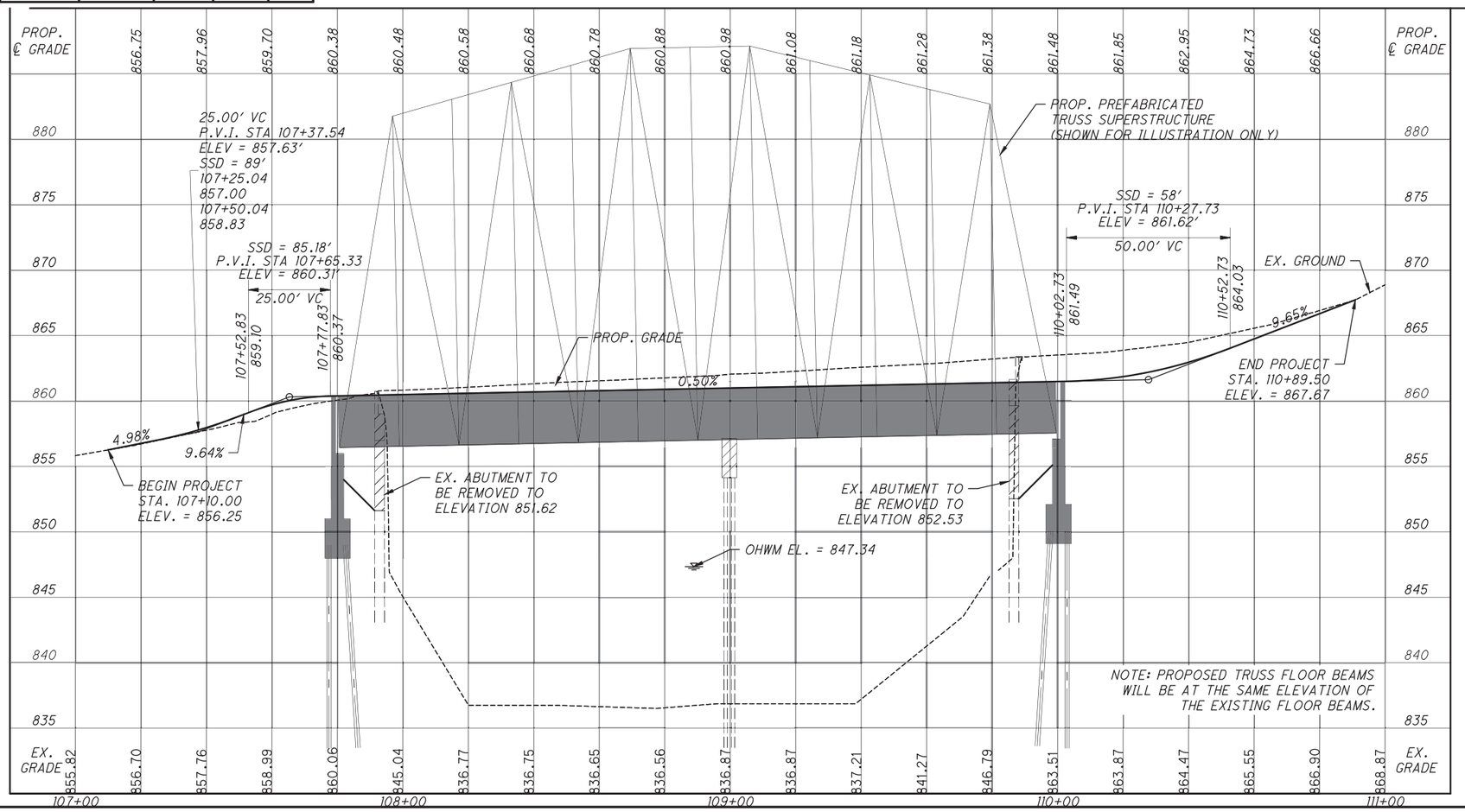
GENERAL SUMMARY

COS-CR 365-00.08

TBR - TO BE REMOVED
DND - DO NOT DISTURB



CURVE TABLE							
CURVE NO.	P.I. STATION	Δ	Dc	R	L	T	E
C6	106+58.52	0°47'53"	0°26'59"	12737.76	177.40	88.70	0.31
C7	107+64.39	50°05'13"	0°00'00"	36.75	32.12	17.17	3.81



HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JDK
CHECKED FTW

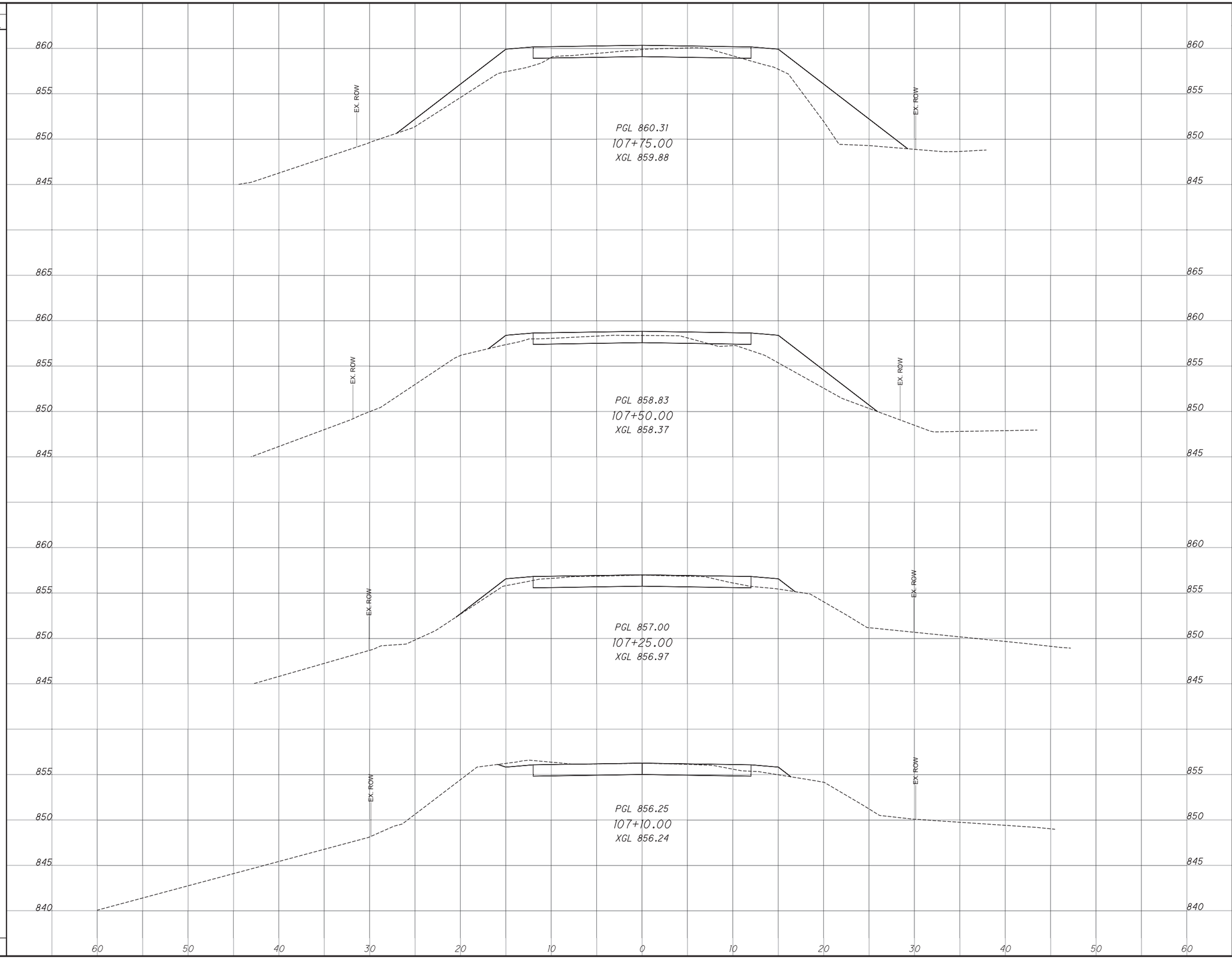
PLAN AND PROFILE - C.R. 365 STA. 107+10 TO STA. 110+90

COS-CR 365-00.08

6
26

I:\Bridge Plan\Bridge Construction Files\2025 Bridges\PID 108777 TIV-C0365-0001 1630016 LBR\Plans - Coshocton County\Coshocton Plans\Structures\626002_GP001.dwg 29-Apr-25 12:59 PM

SEEDING	
END WIDTH	SQ. YDS.
40	30
23	64
12	34
9	15
84	143



END AREA	
CUT	FILL
0	9
0	5
0	1
0	1

VOLUME	
CUT	FILL
0	72
0	29
1	5
0	0
1	106

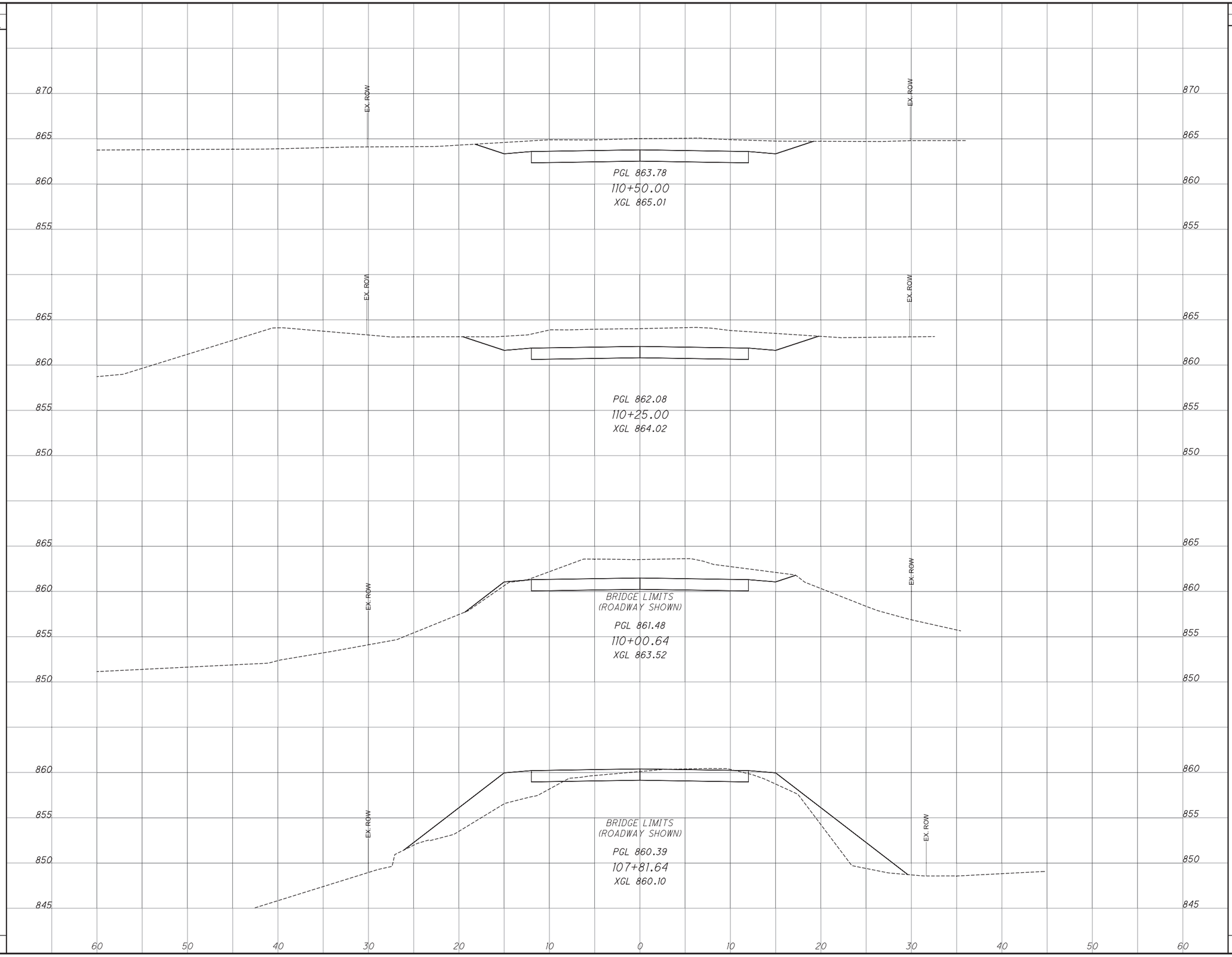
CALCULATED JDK

CHECKED FTW

CROSS SECTIONS
STA. 107+10 TO STA. 107+75

COS-CR 365-00.08

SEEDING END WIDTH	SEEDING SQ. YDS.
14	39
16	45
14	38
39	0
83	122



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
5	0		
		50	0
7	0		
		51	1
5	0		
		0	0
0	8		
		0	20
		101	21

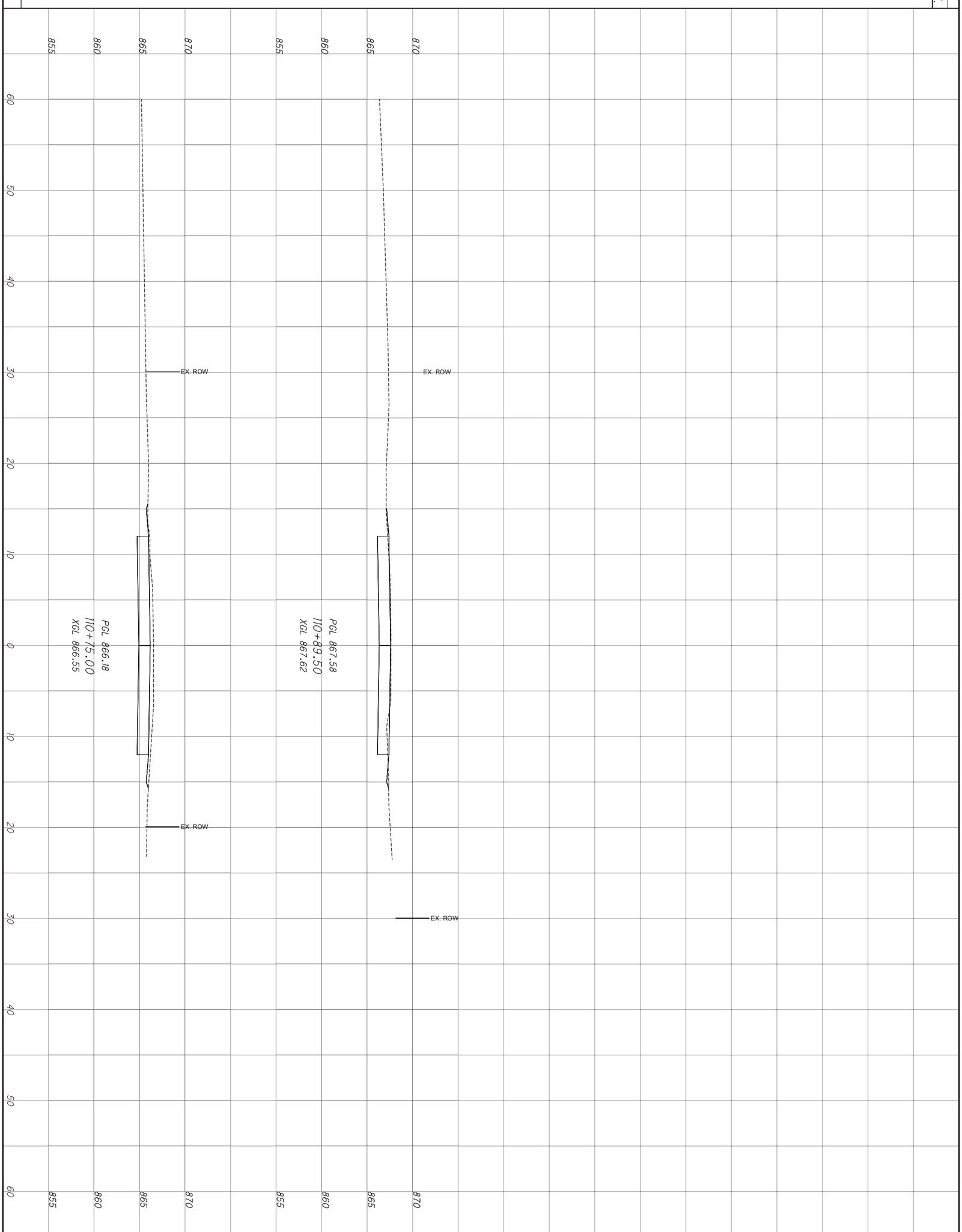
CALCULATED JDK

CHECKED FTW

CROSS SECTIONS
STA. 107+81.64 TO STA. 110+50

COS-CR 365-00.08

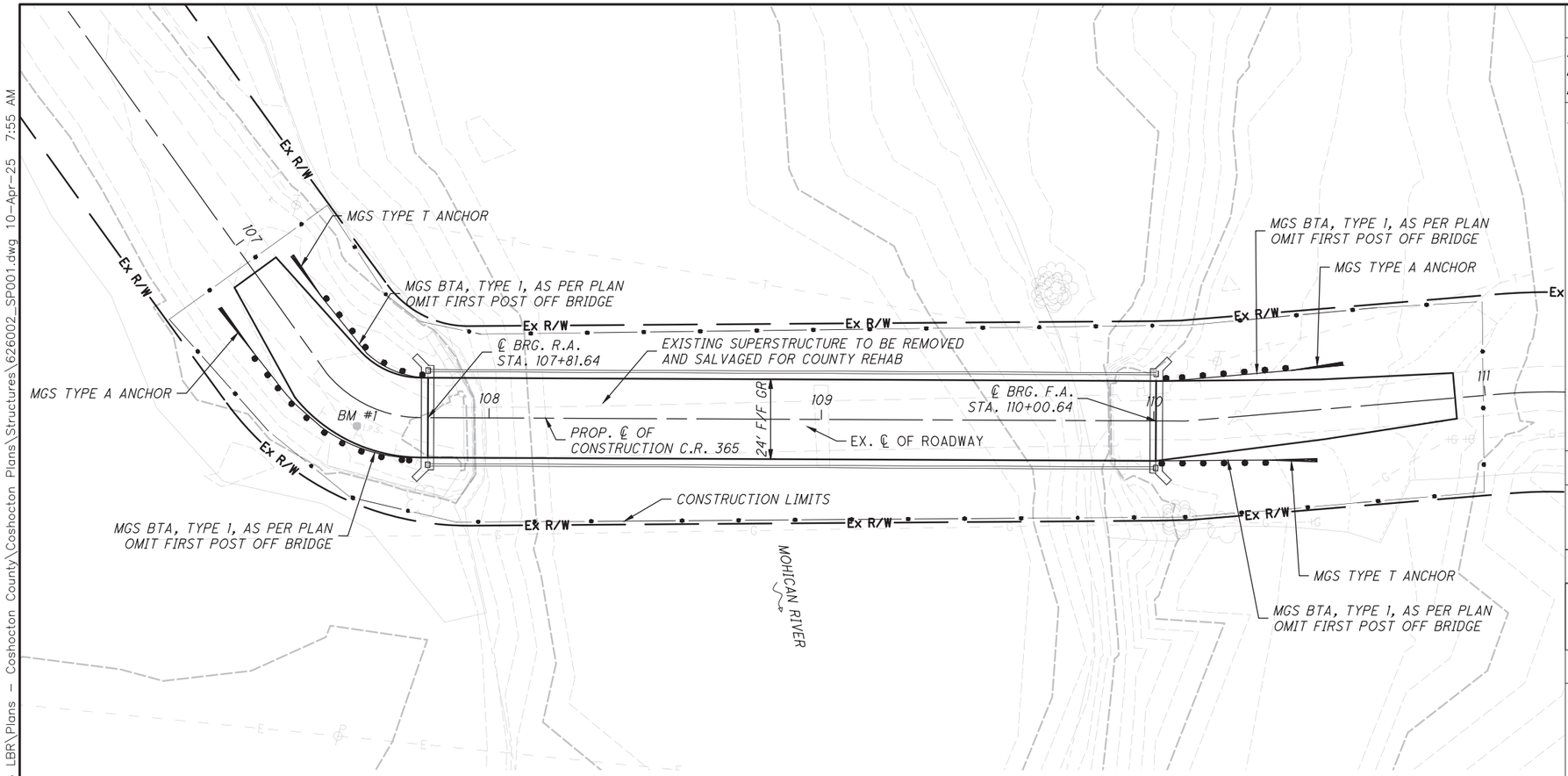
SEEDING		
END WIDTH	SQ. YDS.	
15	8	7
13	13	0

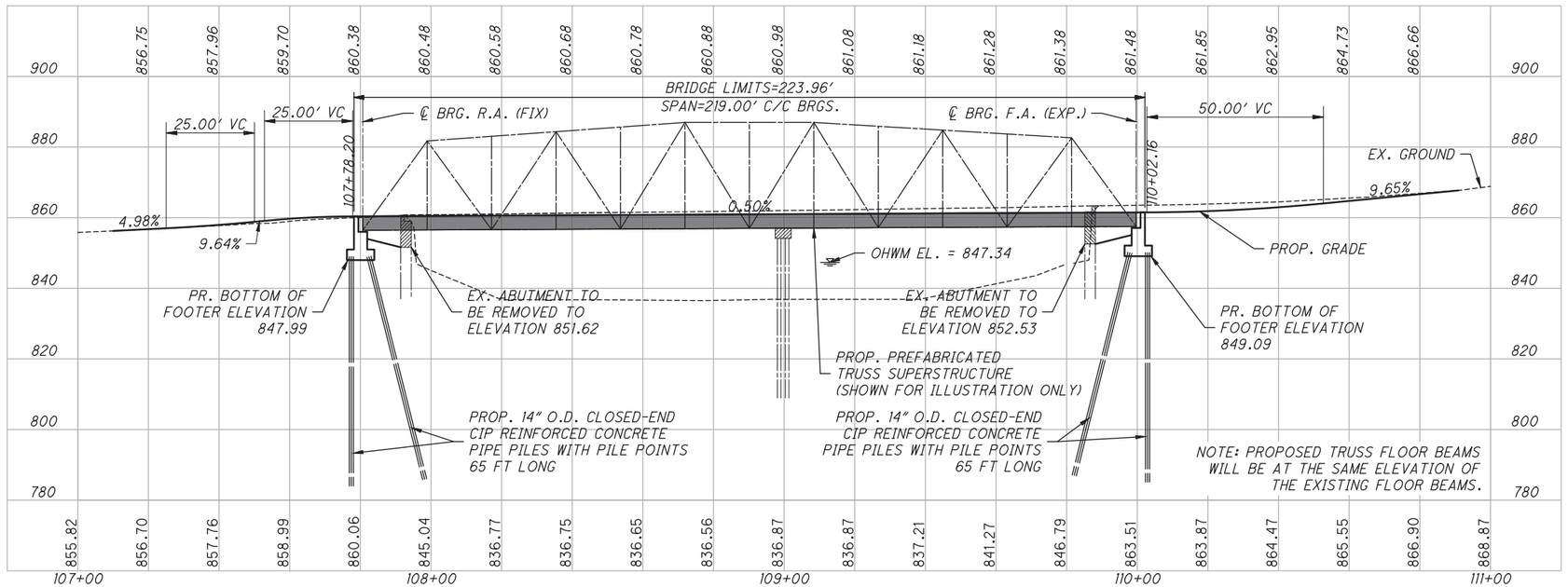


END AREA		
CUT	FILL	
1	0	0
0	0	0

VOLUME	
CUT	FILL
24	2
0	0

9 / 26	COS-CR 365-00.08	CROSS SECTIONS STA. 110+75.00 TO STA. 110+89.50	CALCULATED JDK CHECKED FTW





BENCHMARK DATA

BM #1 IRON PIN, NORTHING: 271960.8832,EASTING: 2057865.9730, EL. 858.69
BM #2 IRON PIN, NORTHING: 272048.4232,EASTING: 2058300.1176, EL. 879.50
BM #3 IRON PIN, NORTHING: 272349.4411,EASTING: 2057415.3484, EL. 854.61

NOTES

1. EXISTING UTILITIES ARE TO REMAIN UNLESS NOTED OTHERWISE.

HYDRAULIC DATA

DRAINAGE AREA= 987 SQ. MILES
Q(10)= 23600 CFS V(10)= N/A
Q(100)= 37700 CFS V(100)= N/A

DESIGN TRAFFIC

CURRENT ADT (2017) = 230 DESIGN ADT (2036) = 270
CURRENT ADTT (2017) = 14 DESIGN ADTT (2036) = 16
DIRECTIONAL DISTRIBUTION = 0.53

EXISTING STRUCTURE

TYPE: TWO-SPAN, UNPAINTED WEATHERING STEEL PONY TRUSS WITH CORRUGATED STEEL DECK AND REINFORCED CONCRETE AND MASONRY ABUTMENTS, AND CAPPED PILE PIER
SPANS: 104'-0"(±), 92'-0"(±) c/c BEARINGS
ROADWAY: 16'-0"(±) FACE-TO-FACE OF RAILING, 19'-0"(±) OUT-TO-OUT OF DECK
LOADING: HS-20
SKEW: NONE
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.0156(±) FT/FT
STRUCTURE FILE NUMBER: 1630016
DATE BUILT: 1912 (WITH 1993 REHAB)
DISPOSITION: EXISTING BRIDGE TO BE REPLACED

PROPOSED STRUCTURE

TYPE: SINGLE SPAN A709 GALV. PREFABRICATED STEEL TRUSS SUPERSTRUCTURE WITH REINFORCED CONCRETE DECK ON NEW CONCRETE ABUTMENTS
SPANS: 219'-0" c/c BEARINGS
ROADWAY: 24'-0" FACE/FACE OF RAILING
LOADING: HL93
FUTURE WEARING SURFACE: NONE
SKEW: NONE
WEARING SURFACE: CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.0156 FT/FT
DECK AREA: 5,352 SF
COORDINATES: LATITUDE 40°24'45.74" N
LONGITUDE 82°10'44.45" W

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JDK
CHECKED FTW

SITE PLAN
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER
COS-CR 365-00.08

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

DS-1-92 DATED (REVISED) 7/15/22
EXJ-4-87 DATED (REVISED) 7/15/22
GSD-1-99 DATED (REVISED) 1/15/21
TST-1-99 DATED (REVISED) 1/15/21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
800 DATED 4/21/23
832 DATED 7/15/22

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

DESIGN LOADING INCLUDES:
VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2:
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 GALVANIZED
PER CMS 711.02, YIELD STRENGTH = 50 KSI

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05, 105.02, AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE ITEM 613 LOW STRENGTH MORTAR BACKFILL, AND GRANULAR MATERIAL, TYPE B, AS SHOWN ON SHEETS 16 AND 17. THIS COST SHALL BE INCLUDED IN THIS PAY ITEM.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THE ENTIRE SUPERSTRUCTURE TO BE REMOVED. REAR ABUTMENT TO BE REMOVED TO ELEVATION 851.62 AND FORWARD ABUTMENT TO BE REMOVED TO ELEVATION 852.53. THE TRUSSES, TRUSS FLOOR BEAMS, AND STRINGERS SHALL BE SALVAGED AND BECOME PROPERTY OF THE COSHOCTON COUNTY ENGINEER. THEY SHALL BE UNBOLTED AND STORED ON-SITE TO BE HAULED AWAY BY COUNTY CREWS.

ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

THIS ITEM SHALL CONSIST OF DESIGNING, FURNISHING, GALVANIZING, TRANSPORTING, ERECTING, AND INSTALLING IN PLACE THE COMPLETE TRUSS SUPERSTRUCTURE, INCLUDING ALL FRAMING, RAILINGS, BEARINGS, AND ALL INCIDENTALS, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS AND THESE SPECIFICATIONS.

SEPARATE PAYMENT WILL BE MADE FOR DECK CONCRETE, EXPANSION JOINT, TST RAIL, AND SUBSTRUCTURE ITEMS LISTED ON THE ESTIMATED QUANTITIES SHEET. HOWEVER, ALL OTHER WORK OR ITEMS NECESSARY TO PROVIDE THE COMPLETED IN-PLACE TRUSS SUPERSTRUCTURE ARE INCIDENTAL TO AND INCLUDED FOR PAYMENT WITH THIS ITEM.

THESE SPECIFICATIONS ARE FOR A TRUSS STRUCTURE OF BOLTED STEEL CONSTRUCTION AND SHALL BE REGARDED AS MINIMUM STANDARDS FOR DESIGN AND CONSTRUCTION. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ODOT CMS SECTION 513.

DESIGNER

1. THE DESIGN FIRM SHALL BE AN ODOT PREQUALIFIED LEVEL 2 CONSULTANT WITH TRUSS DESIGN EXPERIENCE OF SIMILAR OR LARGER SIZE OR THE DESIGN FIRM SHALL HAVE EXPERIENCE OF THE DESIGNING AT LEAST 5 TRUSS BRIDGES OF SIMILAR SIZE OR LARGER.
2. THE DESIGNER SHALL PROVIDE THE ENGINEER WITH SHOP DRAWINGS AS PER SECTION 501.04 OF THE CMS AND LOAD RATING REPORT WITH BRIOO PER LATEST ODOT BRIDGE DESIGN MANUAL. INCLUDE PROOF OF CONSULTANT PREQUALIFICATION AND TRUSS DESIGN EXPERIENCE WITH THE SHOP DRAWINGS SUBMITTAL.
3. THE DESIGNER SHALL DESIGNATE THE TENSION AND COMPRESSION ZONE IN THE NON-REDUNDANT STEEL TENSION MEMBERS.

DIMENSIONS

1. WIDTH: INSIDE CLEAR WIDTH OF BRIDGE SHALL BE 24'-0".
2. LENGTH: BRIDGE CENTER TO CENTER BEARING LENGTH IS TO BE 219'-0"
3. HEIGHT: INSIDE HEIGHT SHALL BE 17'-5"

DESIGN

1. DESIGN TRUSS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL WITH AN ALLOWANCE FOR 0.060 KSF FUTURE WEARING SURFACE.
2. BRIDGE TYPE: THE BRIDGE SHALL BE A BOLTED THROUGH-TRUSS BRACED USING PORTAL AND SWAY BRACES BETWEEN THE MAIN TRUSSES.
3. GUSSET PLATES TO BE DESIGNED TO ADEQUATELY TRANSFER MEMBER STRESSES AT PANEL POINTS.
4. CLEARLY IDENTIFY MEMBERS OR THEIR COMPONENTS THAT ARE NON-REDUNDANT STEEL TENSION MEMBER (NSTM) IN THE PLANS.
5. ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL UTILIZE ZINC COATED ASTM A-325 TYPE 1 HIGH STRENGTH BOLTS.
6. BEARING DEVICES SHALL BE ELASTOMERIC BEARING IN ACCORDANCE WITH ODOT SPECIFICATION SECTION 516.
7. RAILING SHALL BE IN ACCORDANCE WITH ODOT SPECIFICATION SECTION 517.

FABRICATOR

1. FABRICATOR SHALL BE AN ODOT LEVEL 6 QUALIFIED FABRICATOR AS PER ODOT CMS 513.
2. WORKMANSHIP, FABRICATION, AND SHOP DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS SPECIFICATIONS (AASHTO).
3. THE DESIGN OF THE TRUSS SUPERSTRUCTURE, INCLUDING ALL FRAMING, RAILINGS, FLOOR SYSTEM, BEARINGS, AND ALL INCIDENTALS, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS IS THE RESPONSIBILITY OF MANUFACTURER OF THE TRUSS SUPERSTRUCTURE UNIT.
4. TRUSS, STRINGERS AND FLOOR BEAMS SHALL MEET CHARPY V-NOTCH REQUIREMENTS PER CMS 711.01 15 FT-LBS @ 40° F

FABRICATOR (CONTINUED)

1. FAYING SURFACES OF THE BOLTED SPLICES SHALL BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSH. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPLICE BOLT HOLES SHALL BE FREE OF ZINC BUILDUP AND EACH HOLE SHALL BE CHECKED IN THE SHOP AFTER GALVANIZING TO RECEIVE A $\frac{7}{8}$" DIAMETER DRIFT PIN.
2. AREAS OF FIELD CONNECTIONS SHALL HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPLICE PLATES, BEARINGS, OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.
3. AFTER GALVANIZING, MATERIAL SHALL BE PLACED IN SHOP ASSEMBLY PER SECTION 513.24 OF THE SPECIFICATION 513 TO CHECK ALIGNMENT OF HOLES, SWEEP, AND CAMBER AGAINST THE FABRICATORS ORIGINAL RECORDED LAY DOWN DIMENSIONS.
4. ROLLED, SHEARED, AND FLAME CUT SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ODOT CMS 513.12. WHERE STEEL BEAM SURFACES ARE TO RECEIVE A COATING OR GALVANIZING, ALL FOUR ROLLED EDGES OF THE TOP FLANGE SHALL BE GROUND TO $\frac{1}{8}$" RADUIS±$\frac{1}{16}$" IN ACCORDANCE WITH ODOT 514.13 B.
5. BEAM HOLES SHALL BE DRILLED FULL SIZE IN ASSEMBLY USING A TEMPLATE AND ROTO-BROACH, SHELL DRILL OR OTHER SIMILAR TOOL AS PER 513.19.
6. CAMBER TOLERANCE: -0" TO +3/4"
7. ALL WELDING SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5 BRIDGE WELDING CODE AS AMENDED BY SUPPLEMENT 1011 PER 513.21.
8. SUBMIT ERECTION PLANS ACCORDING TO CMS 501.05
9. IN ADDITION TO THE REQUIREMENTS OF CMS 513 & 711.02, GALVANIZED COATING SYSTEM SHALL MEET THE REQUIREMENTS OF THE NOTE "GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES" ON SHEETS 11, 12, AND 13.

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES

1.1.1 DESCRIPTION

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 513, THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND GALVANIZE ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE GALVANIZED COATING SYSTEM MAY BE APPLIED BY A GALVANIZER NOT QUALIFIED AS A FABRICATION SHOP UNDER CMS ITEM 513, BUT THE APPROVED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE APPLIED GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE-FABRICATING, ADDITIONAL LAYDOWNS REQUIRED TO ASSURE THE FABRICATED STEEL MEETS ALL REQUIREMENTS OF THIS SPECIFICATION. CMS SECTIONS 513.27 AND 513.28 SHALL NOT APPLY.

THIS ITEM SHALL ALSO INCLUDE GALVANIZING, PER 711.02, OF ALL NUTS, WASHERS, BOLTS, ANCHOR BOLTS.

GRIND THE GALVANIZED COATING OFF THE TOP FLANGE AT EACH SHEAR STUD PRIOR TO FIELD WELDING IT.

1.1.2 PRE-FABRICATION MEETING

IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER CMS SECTION 513.07, BOTH THE FABRICATOR'S QUALITY CONTROL PAINT SPECIALIST, (QCPS) AND GALVANIZED COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

1.1.3 QUALITY CONTROL

1.1.3.1 QUALITY CONTROL SPECIALIST

THE QCPS (QUALITY CONTROL PAINT SPECIALIST) REQUIRED UNDER CMS SECTION 514.04A, IS RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCPS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED IN CMS SECTION 514.05.

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

1.1.3.2 QUALITY CONTROL POINTS (QCP)

QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE FABRICATOR'S QCPS AND THE OWNERS'S QA REPRESENTATIVE. THE NEXT OPERATIONAL STEP MUST NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE OWNER'S QA REPRESENTATIVE. AT THESE POINTS THE FABRICATOR MUST AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK MUST BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FAILURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, MUST NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE OWNER TO FINAL ACCEPTANCE.

1.1.3.2.1 SOLVENT CLEANING (QCP #1)
THE STEEL MUST BE SOLVENT CLEANED WHERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1 SOLVENT CLEANING. UNDER NO CIRCUMSTANCES MUST ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. STEEL MUST BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS. THE QCPS SHALL INSPECT AND DOCUMENT THAT THE CLEANING CONFORMS TO SSPC-SP1 AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.2 GRINDING EDGES (QCP #2)

ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES MUST HAVE A $\frac{1}{16}$ INCH [1.6 MM] RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THERMALLY CUT MATERIAL THICKER THAN 1 $\frac{1}{2}$ INCH [40 MM] MUST HAVE THE SIDES GROUND TO REMOVE THE HEAT EFFECTED ZONE, AS NECESSARY TO ACHIEVE THE SPECIFIED SURFACE CLEANING. THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE GRINDING CONFORMS TO THIS SPECIFICATION AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.3 ABRASIVE BLASTING (QCP #3)

BEAMS AND GIRDERS MUST BE PREPARED BY THE FABRICATOR TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) GRADE SIX (6) COMMERCIAL BLAST CLEANING PRIOR TO GALVANIZING. ALL MATERIAL MUST BE FREE OF PAINT MARKS. SECONDARY ANGLE, PLATES, BARS AND SHAPES NEED NOT BE BLAST CLEANED.

ABRASIVES MUST ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVES MUST BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF AN OIL FILM ON THE SURFACE OF THE WATER MUST BE CAUSE FOR REJECTION. THE QCPS MUST PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT.

ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER OR THAT APPEAR AFTER THE BLASTING OPERATION MUST BE CONDITIONED PER ASTM A6. WELDING REPAIRS MUST ONLY BE PERFORMED BY THE ITEM 513 FABRICATOR.

THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE BLAST CONFORMS TO SSPC-SP6, THAT ALL CONDITIONING IS PERFORMED PER ASTM A6, AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

CALCULATED JDK | CHECKED FTW

GENERAL NOTES

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

1.1.3.2.4 GALVANIZING (QCP#4)

GALVANIZED PER 711.02 AND THIS SPECIFICATION. COATING THICKNESS MUST BE A MINIMUM OF 4 MILS [100 µm] MEASURED AS SPECIFIED. MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER AND ERECTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. PRIOR TO GALVANIZING, SURFACE IMPERFECTIONS MAY BE REPAIRED BY THE FABRICATOR IN CONFORMANCE WITH ASTM A6. IMPERFECTIONS GREATER THAN THE LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE DEPARTMENT.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A| OR A3.

DOCUMENTATION OF COATING THICKNESS MUST BE PERFORMED BY THE QCPS. THE QCPS MUST RECORD THE GAGE READINGS AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.5 FAYING SURFACE CLEANING (QCP #5)

AREAS OF FIELD CONNECTIONS MUST HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPLICE PLATES, BEARINGS OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.

FAYING SURFACES OF THE BOLTED SPLICES MUST BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPLICE BOLT HOLES MUST BE FREE OF ZINC BUILD UP. AFTER GALVANIZING, EACH HOLE MUST BE CHECKED IN THE SHOP BY USING A DRIFT PIN WITH A DIAMETER 1⁄5 INCH [1.6 MM] GREATER THAN THE DIAMETER OF THE BOLT TO BE USED IN THAT HOLE. CONSIDERATION WILL BE GIVEN TO OTHER METHODS OF TREATING THE FAYING SURFACES IF A WRITTEN REQUEST IS SUBMITTED TO THE OFFICE OF STRUCTURAL ENGINEERING (OSE) IN ACCORDANCE WITH CMS 108.05.

INSPECTION OF THE ROUGHENING OF THE FAYING SURFACES AND CHECKING OF HOLES WITH DRIFT PINS MUST BE PERFORMED BY THE QCPS. ACCEPTANCE OF THE FAYING SURFACES AND HOLES SHALL BE DOCUMENTED BY THE QCPS.

1.1.3.2.6 SECOND LAY DOWN (QCP # 6)

AFTER GALVANIZING, MATERIALS MUST BE PLACED IN A SECOND SHOP ASSEMBLY PER CMS SECTION 513.24 TO CHECK ALIGNMENT OF HOLES, SWEEP AND CAMBER AGAINST THE FABRICATORS ORIGINAL RECORDED LAY DOWN DIMENSIONS. THIS SHOP ASSEMBLY MAY BE PERFORMED AT THE GALVANIZERS FACILITY, BY THE FABRICATOR'S PERSONNEL, IF APPROVED BY THE OSE. THE SECOND LAY DOWN MAY BE WAIVED BY THE OSE IF THE FABRICATOR RECORDS INDIVIDUAL BEAM CAMBERS AND SWEEPS DURING THE FIRST LAY DOWN, AND THE NEW INDIVIDUAL BEAM CAMBERS AND SWEEPS, AFTER GALVANIZING, COMPARED TO THE FIRST LAY DOWN ARE WITHIN THE FOLLOWING TOLERANCES:

BEARING POINTS AFTER GALVANIZING MUST BE WITHIN ±1/8 INCH [3.2 MM] OF THE APPROVED SHOP DRAWING LAY DOWN.

CAMBER POINTS AFTER GALVANIZING MUST BE ±1/4 INCH [6 MM] OR - 0 INCHES FROM THE FIRST LAY DOWN.

SWEEP POINTS AFTER GALVANIZING MUST BE ±3/8 INCH [9 MM] FROM THE FIRST LAY DOWN.

INDIVIDUAL BEAMS THAT EXCEED THE LISTED TOLERANCES MUST BE PLACED WITH AT LEAST TWO ADJACENT BEAMS IN LAY DOWN FOR CHECKING AGAINST THE RECORDED SHOP ASSEMBLY RECORDS PER CMS SECTION 513.04. DOCUMENTATION OF THE SECOND LAY DOWN OR INDIVIDUAL MEMBER CAMBERS MUST BE RECORDED BY THE QCPS PER CMS SECTION 513.24.

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

1.1.3.2.7 FIELD REPAIR OF DAMAGED AREAS (QCP#7)

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE CONTRACTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. IMPERFECTIONS MAY BE REPAIRED BY GRINDING AS ALLOWED BY ASTM A6 BY THE CONTRACTOR. IMPERFECTIONS THAT ARE GREATER THAN THE GRINDING LIMITS ALLOWED BY ASTM A6, MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE OSE.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A| OR A3.

DAMAGED GALVANIZING WHICH WILL BE INACCESSIBLE FOR REPAIR AFTER ERECTION MUST BE REPAIRED PRIOR TO ERECTION.

IN ORDER TO MINIMIZE DAMAGE TO THE GALVANIZED STEEL, CONCRETE SPLATTER AND FORM LEAKAGE MUST BE WASHED FROM THE SURFACE OF THE STEEL SHORTLY AFTER THE CONCRETE IS PLACED AND BEFORE IT IS DRY. IF THE CONCRETE DRIES, IT MUST BE REMOVED.

TEMPORARY ATTACHMENTS, SUPPORTS FOR SCAFFOLDING AND FINISHING MACHINE OR FORMS MUST NOT DAMAGE THE COATING SYSTEM. IN PARTICULAR, SUFFICIENT SIZE SUPPORT PADS MUST BE USED ON THE FASCIAS WHERE BRACING IS USED.

DOCUMENTATION OF GALVANIZING REPAIRS MUST BE PROVIDED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.8 FINAL REVIEW (QCP # 8)

AFTER THE ERECTION WORK HAS BEEN COMPLETED, INCLUDING ALL CONNECTIONS AND THE APPROVED REPAIR OF ANY DAMAGED BEAMS, GIRDERS OR OTHER STEEL MEMBERS, AND THE DECK HAS BEEN PLACED, THE CONTRACTOR AND ENGINEER MUST INSPECT THE STRUCTURE FOR DAMAGED COATING. (QCP #8). DAMAGED AREAS MUST BE REPAIRED BY QCPS #7. AT THE COMPLETION OF CONSTRUCTION, THE GALVANIZING MUST BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SPILLAGE. SUCH SPILLAGE WILL BE REMOVED BY SOLVENT CLEANING PER SSPC-SP1 (QCP #1).

DOCUMENTATION OF FINAL REVIEW MUST BE PROVIDED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.4 TESTING EQUIPMENT

THE FABRICATOR MUST PROVIDE THE QCPS INSPECTOR THE FOLLOWING TESTING EQUIPMENT IN GOOD WORKING ORDER FOR THE DURATION OF THE PROJECT:

ONE (POSITECTOR 2000 OR 6000, QUANIX 2200, OR ELCOMETER A345FBI1) AND THE CALIBRATION PLATES, 38-200 MM AND 250-625 MM [1.5 -8 MILS AND 10-25 MILS] AS PER THE NBS CALIBRATION STANDARDS IN ACCORDANCE WITH ASTM D-1186.

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

1.1.5 COATING THICKNESS

GALVANIZED THICKNESS MUST BE DETERMINED BY USE OF TYPE 2 MAGNETIC GAUGE IN ACCORDANCE WITH THE FOLLOWING:
FIVE SEPARATE SPOT MEASUREMENTS MUST BE MADE, SPACED EVENLY OVER ONE (1) RANDOMLY SELECTED, 100 SQUARE FEET [9 SQUARE METERS] OF SURFACE AREA ON EACH STRUCTURAL MEMBER. THREE GAUGE READINGS MUST BE MADE FOR EACH SPOT MEASUREMENT. THE PROBE MUST BE MOVED A DISTANCE OF 1 TO 3 INCHES [25 TO 75 MM] FOR EACH NEW GAUGE READING. ANY UNUSUALLY HIGH OR LOW GAUGE READING THAT CANNOT BE REPEATED CONSISTENTLY MUST BE DISCARDED. THE AVERAGE (MEAN) OF THE 3 GAUGE READINGS MUST BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FOOT [9 SQUARE METERS] AREA MUST NOT BE LESS THAT THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FOOT [9 SQUARE METERS] AREA MUST BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF 3 READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN OR OVER-RUN BY A GREATER AMOUNT. ALL SPLICE MATERIAL AND SECONDARY MEMBERS MUST HAVE AT LEAST ONE SPOT MEASURED ON EACH PIECE. THE PROBE MUST BE MOVED SO THAT ONE READING IS TAKEN AT EACH END AND MIDDLE OF THE PIECE FOR A TOTAL OF THREE READINGS.

THE QCPS MUST INSPECT AND PROVIDE DOCUMENTATION OF ACTUAL DATA, THE GALVANIZED THICKNESS CHECKS WERE PERFORMED PER SPECIFICATION, AND THE COATING THICKNESS MEETS SPECIFICATION REQUIREMENTS.

1.1.6 HANDLING AND SHIPPING

REASONABLE CARE MUST BE EXERCISED IN HANDLING THE GALVANIZED STEEL DURING SHIPPING, ERECTION, AND SUBSEQUENT CONSTRUCTION OF THE BRIDGE. THE STEEL MUST BE INSULATED FROM THE BINDING CHAINS BY SOFTENERS. HOOKS AND SLINGS USED TO HOIST STEEL MUST BE PADDED. DIAPHRAGMS AND SIMILAR PIECES MUST BE SPACED IN SUCH A WAY THAT NO RUBBING WILL OCCUR DURING SHIPMENT THAT MAY DAMAGE THE GALVANIZING. THE STEEL MUST BE STORED ON PALLETS AT THE JOB SITE, OR BY OTHER MEANS, SO THAT IT DOES NOT REST ON THE GROUND OR SO THAT COMPONENTS DO NOT FALL OR REST ON EACH OTHER.

1.1.7 SAFETY REQUIREMENTS AND PRECAUTIONS

THE CONTRACTOR MUST MEET THE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), IN ADDITION TO THE SCAFFOLDING REQUIREMENTS BELOW.

1.1.8 SCAFFOLDING

RUBBER ROLLERS, OR OTHER PROTECTIVE DEVICES MEETING THE APPROVAL OF THE ENGINEER, MUST BE USED ON SCAFFOLD FASTENINGS. METAL ROLLERS OR CLAMPS AND OTHER TYPES OF FASTENINGS WHICH WILL MAR OR DAMAGE COATED SURFACES MUST NOT BE USED.

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

1.1.9 INSPECTION ACCESS FOR FIELD REPAIR

IN ADDITION TO THE REQUIREMENT OF 105.11, THE CONTRACTOR MUST FURNISH, ERECT, AND MOVE SCAFFOLDING AND OTHER APPROPRIATE EQUIPMENT TO PERMIT THE INSPECTOR THE OPPORTUNITY TO INSPECT (CLOSELY OBSERVE) ALL AFFECTED SURFACES. THIS OPPORTUNITY MUST BE PROVIDED TO THE INSPECTOR DURING ALL PHASES OF THE WORK AND CONTINUE FOR A PERIOD OF AT LEAST TEN (10) WORKING DAYS AFTER THE TOUCH-UP WORK HAS BEEN COMPLETED. WHEN SCAFFOLDING IS USED, IT MUST BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

WHEN SCAFFOLDING, OR THE HANGERS ATTACHED TO THE SCAFFOLDING ARE SUPPORTED BY HORIZONTAL WIRE ROPES, OR WHEN SCAFFOLDING IS PLACED DIRECTLY UNDER THE SURFACE TO BE PAINTED, THE FOLLOWING REQUIREMENTS MUST BE COMPLIED WITH:

WHEN SCAFFOLDING IS SUSPENDED 43" [1100 MM] OR MORE BELOW THE COATED SURFACE TO BE REPAIRED, TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING. ONE ROW OF GUARDRAIL MUST BE PLACED AT 42" [1050 MM] ABOVE THE SCAFFOLDING AND THE OTHER ROW AT 20" [500 MM] ABOVE THE SCAFFOLDING.

WHEN THE SCAFFOLDING IS SUSPENDED AT LEAST 21" [530 MM], BUT LESS THAN 43" [1100 MM] BELOW THE COATED SURFACE TO BE REPAIRED, A ROW OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING AT 20" [500 MM] ABOVE THE SCAFFOLDING.

TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF SCAFFOLDING NOT PREVIOUSLY MENTIONED. THE ROWS OF GUARDRAIL MUST BE PLACED AT 42" [1050 MM] AND 20" [500 MM] ABOVE SCAFFOLDING, AS PREVIOUSLY MENTIONED.

ALL SCAFFOLDING MUST BE AT LEAST 24" [610 MM] WIDE WHEN GUARDRAIL IS USED AND 28" [710 MM] WIDE WHEN THE SCAFFOLDING IS SUSPENDED LESS THAN 21" [530 MM] BELOW THE COATED SURFACE TO BE REPAIRED AND GUARDRAIL IS NOT USED. IF TWO OR MORE SCAFFOLDING ARE LAID PARALLEL TO ACHIEVE THE PROPER WIDTH, THEY MUST BE RIGIDLY ATTACHED TO EACH OTHER TO PRECLUDE ANY DIFFERENTIAL MOVEMENT.

ALL GUARDRAIL MUST BE CONSTRUCTED AS A SUBSTANTIAL BARRIER WHICH IS SECURELY FASTENED IN PLACE AND IS FREE FROM PROTRUDING OBJECTS SUCH AS NAILS, SCREWS AND BOLTS. THERE MUST BE AN OPENING IN THE GUARDRAIL, PROPERLY LOCATED, TO ALLOW THE INSPECTOR ACCESS ONTO THE SCAFFOLDING.

THE RAILS AND UPRIGHTS MUST BE EITHER METAL OR WOOD. IF PIPE RAILING IS USED, THE RAILING MUST HAVE A NOMINAL DIAMETER OF NO LESS THAN ONE AND ONE HALF INCHES. IF STRUCTURAL STEEL RAILING IS USE, THE RAILS MUST BE 2 X 2 X $2\frac{3}{8}$ INCH [50 X 50 X 10 MM] STEEL ANGLES OR OTHER METAL SHAPES OF EQUAL OR GREATER STRENGTH. IF WOOD RAILING IS USED, THE RAILING MUST BE 2 X 4 INCH [50 X 100 MM] (NOMINAL) STOCK. ALL UPRIGHTS MUST BE SPACED AT NO MORE THAN 8 FEET [2.4 M] ON CENTER. IF WOOD UPRIGHTS ARE USED, THE UPRIGHTS MUST BE 2 X 4 INCHES [50 X 100 MM] (NOMINAL) STOCK.

WHEN THE SURFACE TO BE INSPECTED IS MORE THAN 15 FEET [4.6 M] ABOVE THE GROUND OR WATER, AND THE SCAFFOLDING IS SUPPORTED FROM THE STRUCTURE BEING PAINTED, THE CONTRACTOR MUST PROVIDE THE INSPECTOR WITH A SAFETY BELT AND LIFELINE. THE LIFELINE MUST NOT ALLOW A FALL GREATER THAN 6 FEET [2 M]. THE CONTRACTOR MUST PROVIDE A METHOD OF ATTACHING THE LIFELINE TO THE STRUCTURE INDEPENDENT OF THE SCAFFOLDING, CABLES, OR BRACKETS SUPPORTING THE SCAFFOLDING.

CALCULATED JDK | CHECKED FTW

GENERAL NOTES

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

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GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES (CONTINUED)

WHEN SCAFFOLDING IS MORE THAN TWO AND ONE HALF FEET [0. 75 M] ABOVE THE GROUND, THE CONTRACTOR MUST PROVIDE A LADDER FOR ACCESS ONTO THE SCAFFOLDING. THE LADDER AND ANY EQUIPMENT USED TO ATTACH THE LADDER TO THE STRUCTURE MUST BE CAPABLE OF SUPPORTING 250 POUNDS [115 KG] WITH A SAFETY FACTOR OF AT LEAST FOUR (4). ALL RUNGS, STEPS, CLEATS, OR TREADS MUST HAVE UNIFORM SPACING AND MUST NOT EXCEED 12" [305 MM] ON CENTER. AT LEAST ONE SIDE RAIL MUST EXTEND AT LEAST 36" [915 MM] ABOVE THE LANDING NEAR THE TOP OF THE LADDER.

AN ADDITIONAL LANDING MUST BE REQUIRED WHEN THE DISTANCE FROM THE LADDER TO THE POINT WHERE THE SCAFFOLDING MAY BE ACCESSED, EXCEEDS 12" [305 MM]. THE LANDING MUST BE A MINIMUM OF AT LEAST 24" [610 MM] WIDE AND 24" [610 MM] LONG. IT MUST ALSO BE OF ADEQUATE SIZE AND SHAPE SO THAT THE DISTANCE FROM THE LANDING TO THE POINT WHERE THE SCAFFOLDING IS ACCESSED DOES NOT EXCEED 12" [305 MM]. THE LANDING MUST BE RIGID AND FIRMLY ATTACHED TO THE LADDER; HOWEVER, IT MUST NOT BE SUPPORTED BY THE LADDER. THE SCAFFOLDING MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 1000 LBS [455 KG].

IN ADDITION TO THE AFOREMENTIONED REQUIREMENTS, THE CONTRACTOR IS STILL RESPONSIBLE TO OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES. THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC CONTROL TO PERMIT INSPECTION DURING AND AFTER ALL PHASES OF THE PROJECT.

1.1.10 PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR MUST INSTALL AND MAINTAIN SUITABLE SHIELDS OR ENCLOSURES TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS, TRUCKS, BOATS, OR VEHICLES TRAVELING ON, OVER, OR UNDER STRUCTURES HAVING GALVANIZED REPAIRS. THEY MUST BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES.

PAYMENT FOR THE SHIELDS MUST BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING OPERATION. WORK MUST BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDINGS, MOTOR VEHICLES, BOATS, OR OTHER PROPERTY IS OCCURRING.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR MUST RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY, TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE.

1.1.11 POLLUTION CONTROL

THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.

1.1.12 WARRANTY

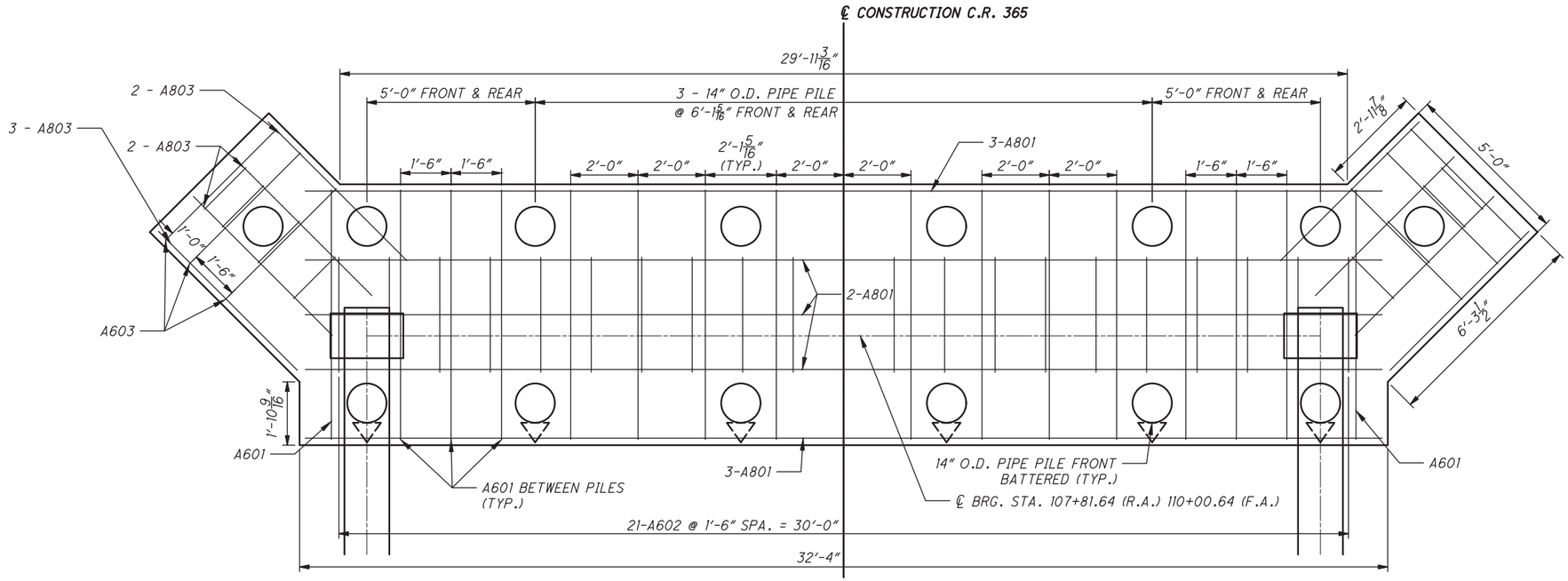
THE STEEL GALVANIZER OF THE BRIDGE ELEMENTS (OTHER THAN BRIDGE FLOORING) SHALL BE A MEMBER OF THE AMERICAN GALVANIZER'S ASSOCIATION AND SHALL PROVIDE THE BRIDGE OWNER A WRITTEN LIMITED WARRANTY AGAINST CORROSION OF THE SUPERSTRUCTURE COMPONENTS FOR A PERIOD OF NOT LESS THAN 35 YEARS.

ESTIMATED QUANTITIES								SPEC & AS PER PLAN BRIDGE SHEET NO.
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTS.	SUPER.	GEN'L	
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS	11/26
203	35110	150	CY	GRANULAR MATERIAL, TYPE B			150	
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING			LS	
503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN			LS	11/26
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION	LS			
507	00650	1900	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1900			
507	00600	1820	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1820			
509	10000	43491	LB	EPOXY COATED STEEL REINFORCEMENT	8341	35150		
511	32210	178	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE		178		
511	43510	135	CY	CLASS QC1 CONCRETE, ABUTMENT	135			
512	10050	877	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	116	761		
513	10121	LS		STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN		LS		11/26
517	70001	463	FT	RAILING (TWIN STEEL TUBE), AS PER PLAN		463		20/26
516	11211	48	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN		48		21/26
SPECIAL	51822301	442	FT	STEEL DRIP STRIP, AS PER PLAN		442		19/26

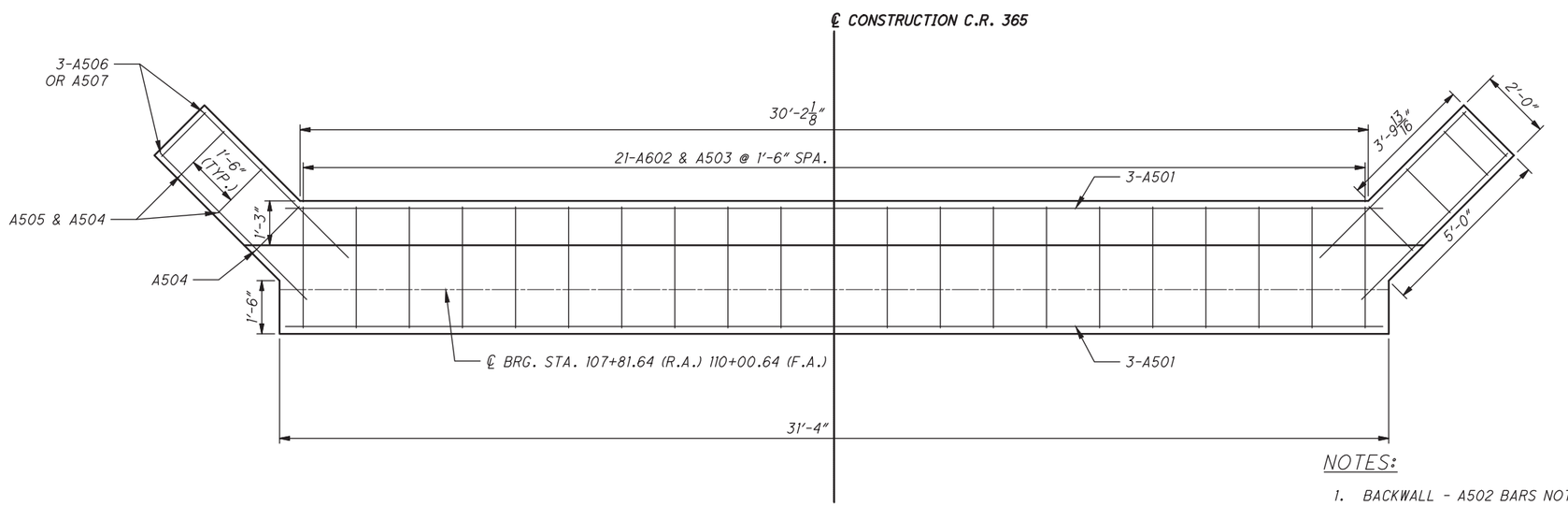
CALCULATED JDK | CHECKED FTW

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08



FOOTING REINFORCEMENT PLAN



ABUTMENT REINFORCEMENT PLAN

NOTES:

1. BACKWALL - A502 BARS NOT SHOWN, SEE SHEETS 16/26 AND 17/26
2. TRUSS SEAT - A802 BARS NOT SHOWN, SEE SHEETS 16/26 AND 17/26

CALCULATED JDK | CHECKED FTW

ABUTMENT DETAILS

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

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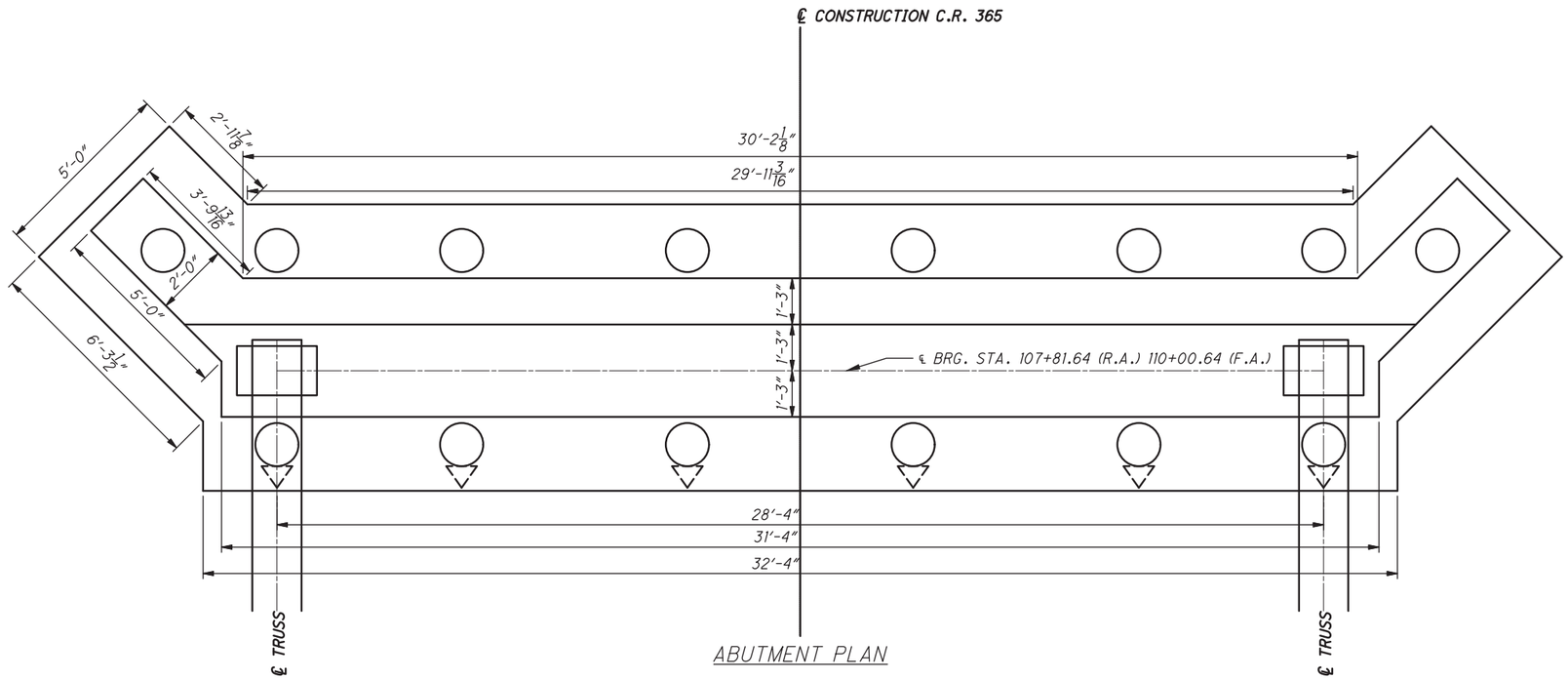
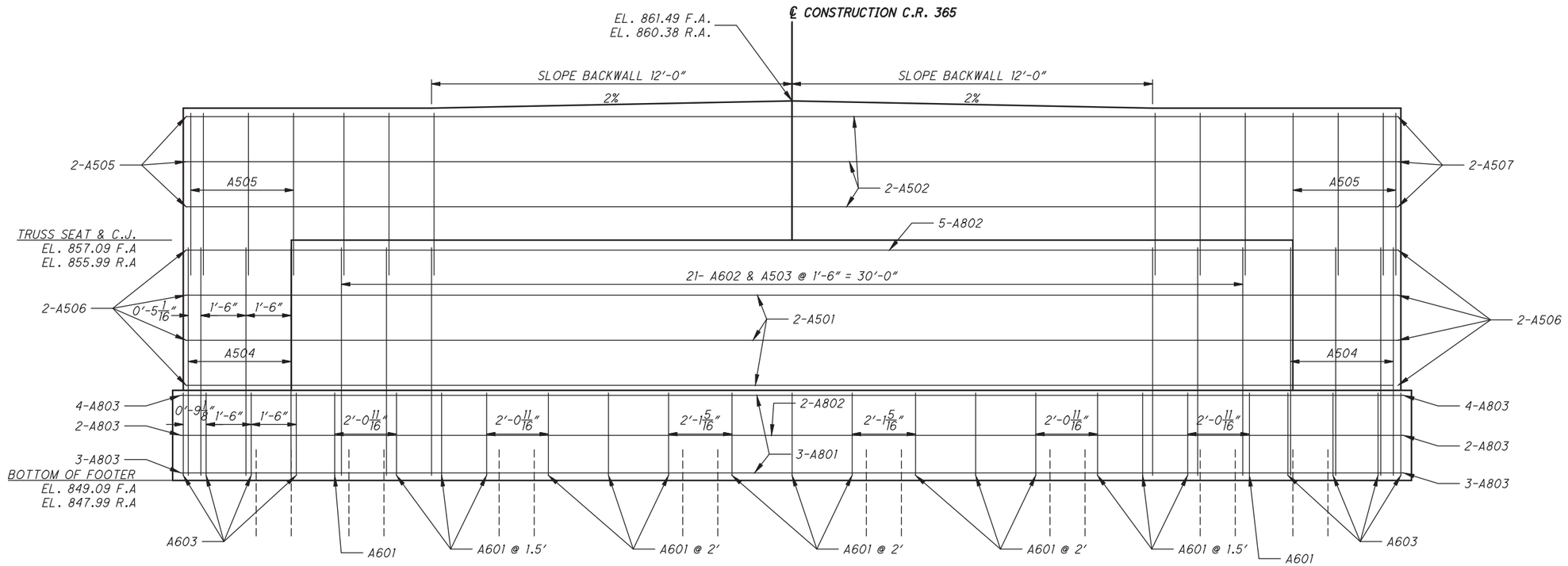
14
26



ABUTMENT PLAN



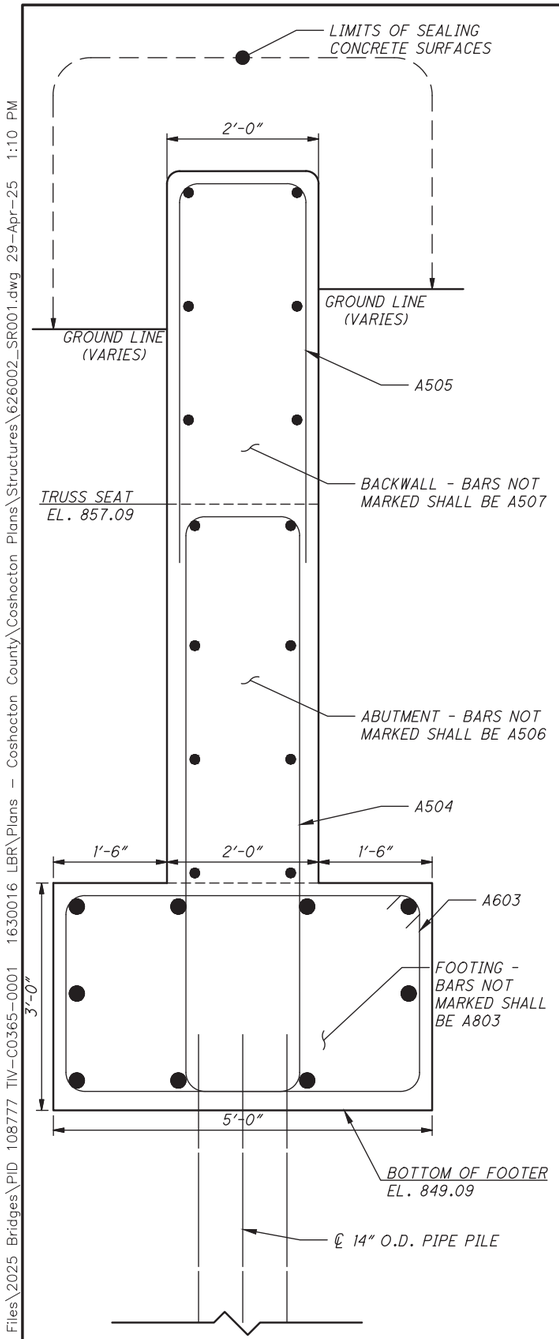
ABUTMENT ELEVATION

CALCULATED JDK
CHECKED FTW

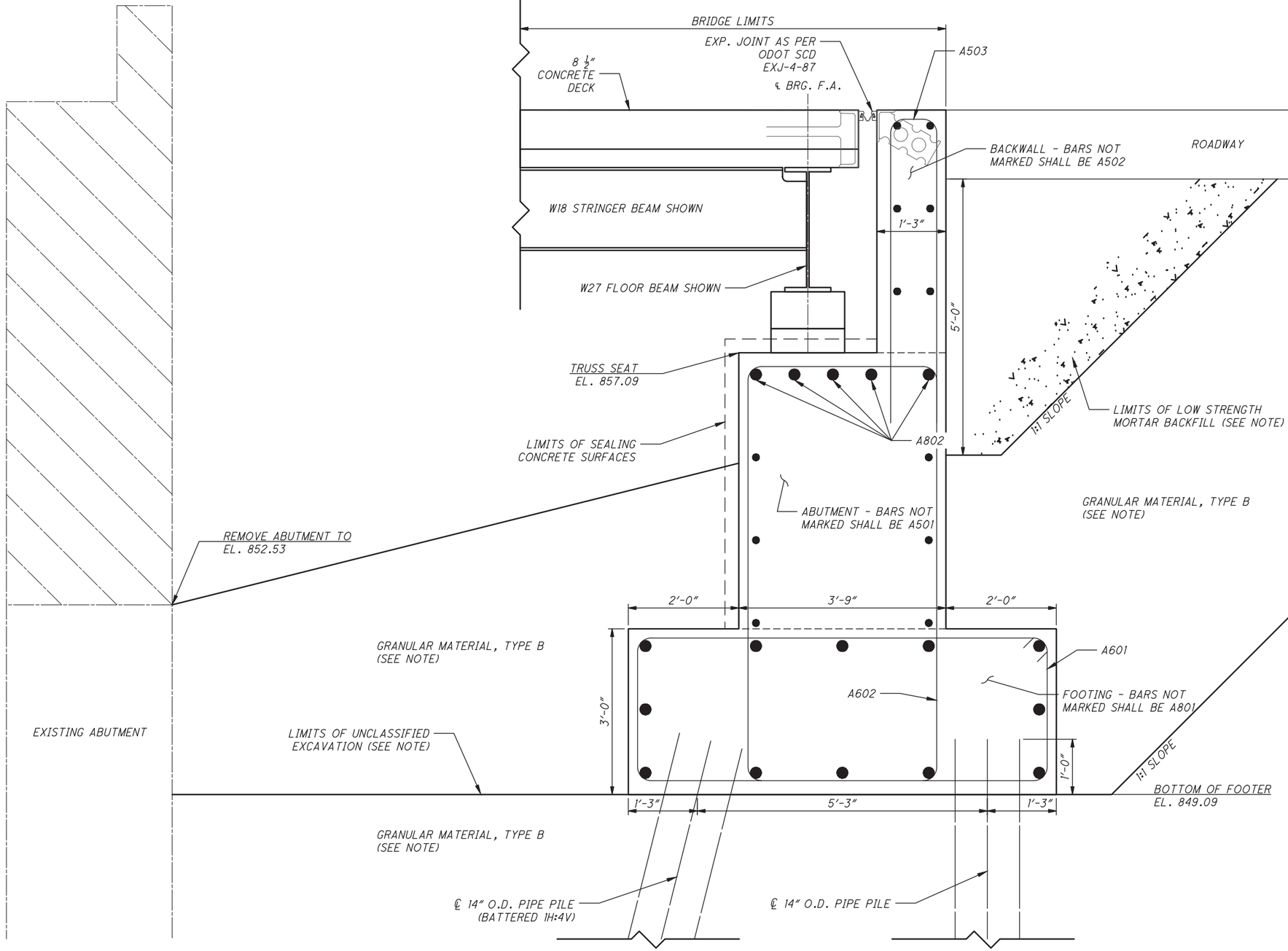
ABUTMENT DETAILS

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08



FORWARD WINGWALL SECTION



FORWARD ABUTMENT SECTION

NOTES:

1. BACKFILL: BACKFILL ABOVE EL. 849.09 SHALL BE PAID UNDER ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN
   BACKFILL BELOW EL. 849.09 SHALL BE PAID UNDER ITEM 203, GRANULAR MATERIAL, TYPE B, AS PER PLAN
2. ABUTMENT REMOVAL:
   THE CONTRACTOR SHALL REMOVE ALL MATERIAL DOWN TO THE CUT LINE SHOWN ON THIS SHEET.
3. REMOVAL BASIS OF PAYMENT:
   PAYMENT FOR ALL REMOVAL SHALL BE MADE AT THE LUMP SUM CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

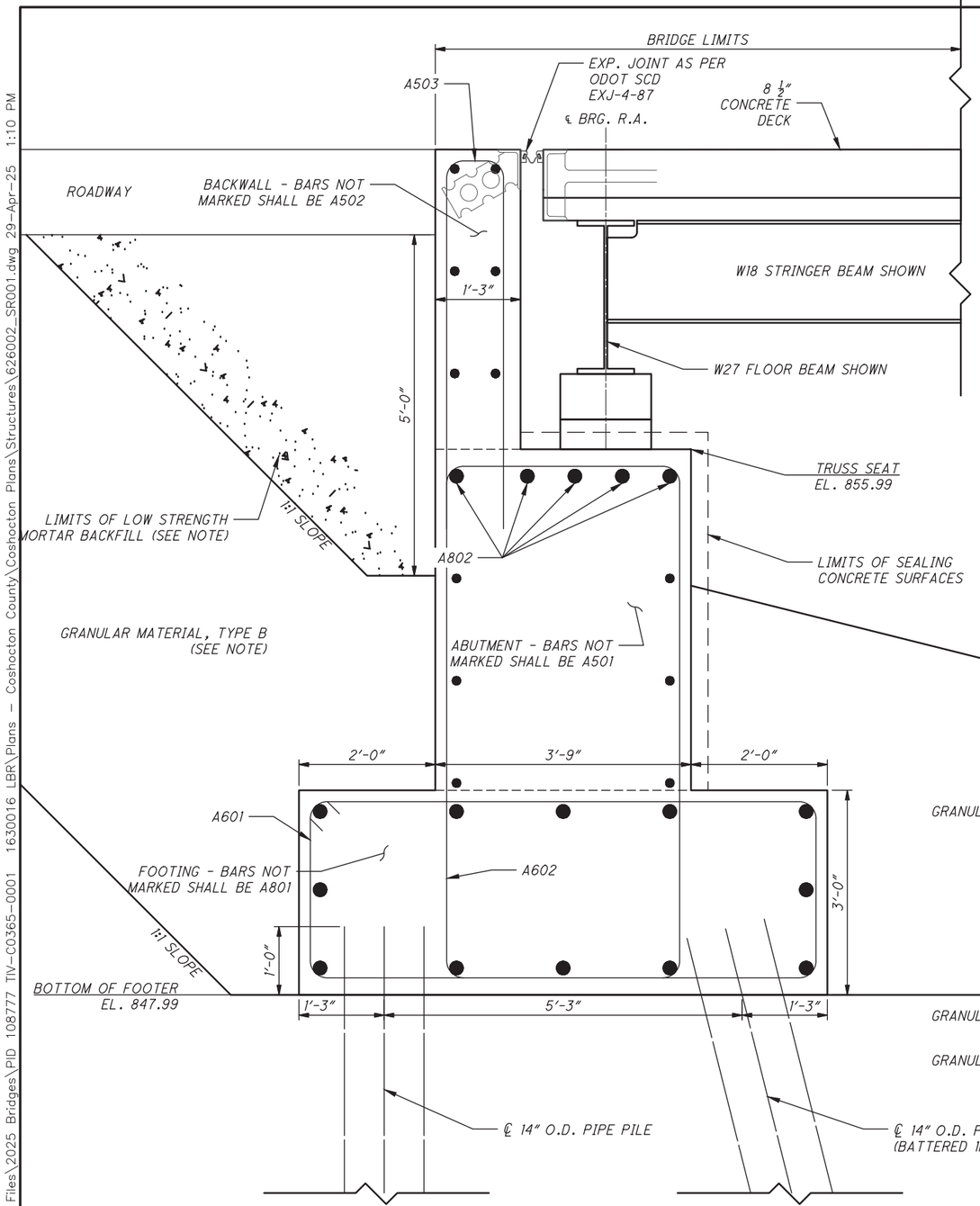
CALCULATED JDK | CHECKED FTW

ABUTMENT DETAILS

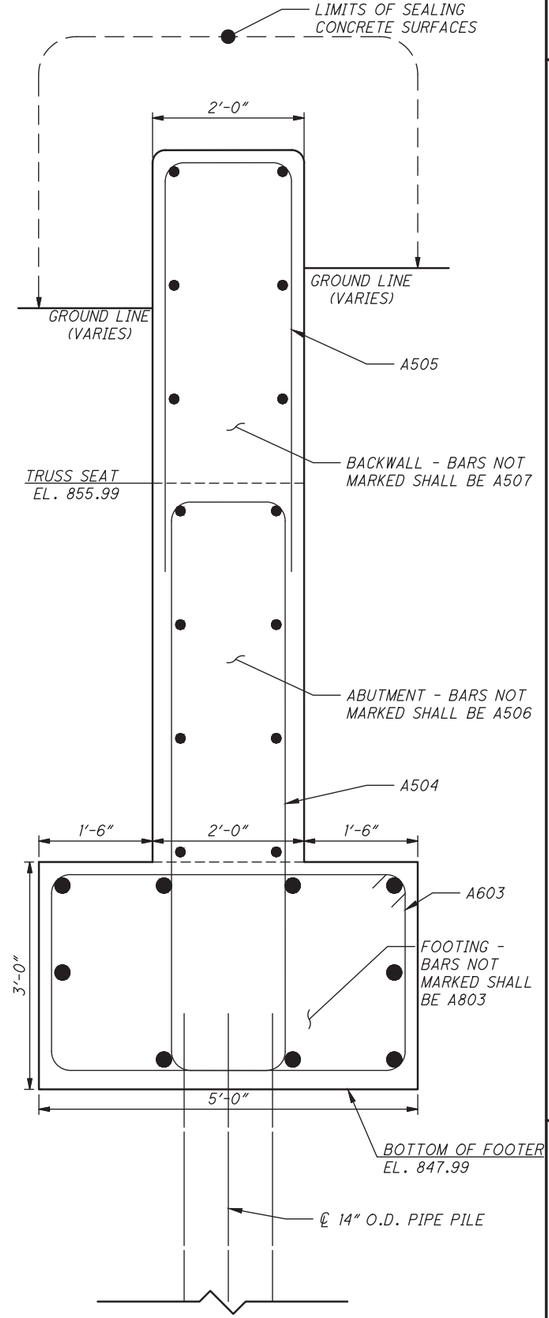
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

16
26



REAR ABUTMENT SECTION



REAR WINGWALL SECTION

NOTES:

1. BACKFILL:
   BACKFILL ABOVE EL. 847.99 SHALL BE PAID UNDER ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN
   BACKFILL BELOW EL. 847.99 SHALL BE PAID UNDER ITEM 203, GRANULAR MATERIAL, TYPE B, AS PER PLAN

2. ABUTMENT REMOVAL:
   THE CONTRACTOR SHALL REMOVE ALL MATERIAL DOWN TO THE CUT LINE SHOWN ON THIS SHEET.

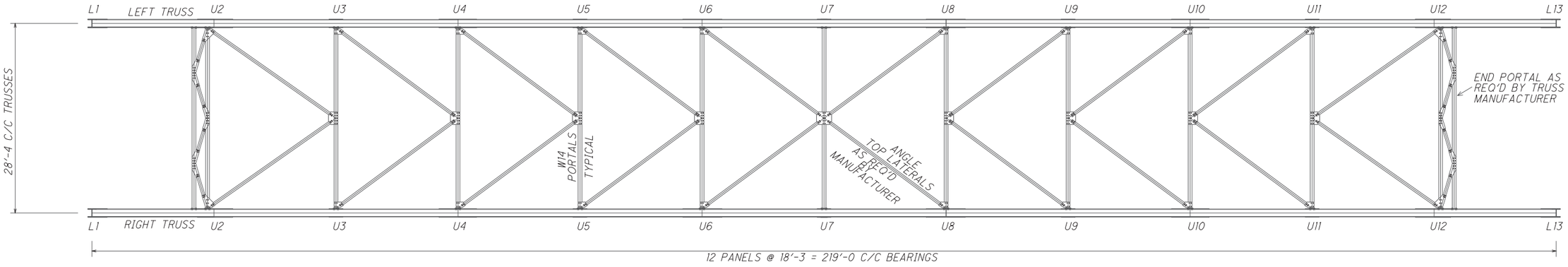
3. REMOVAL BASIS OF PAYMENT:
   PAYMENT FOR ALL REMOVAL SHALL BE MADE AT THE LUMP SUM CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

CALCULATED JDK | CHECKED FTW

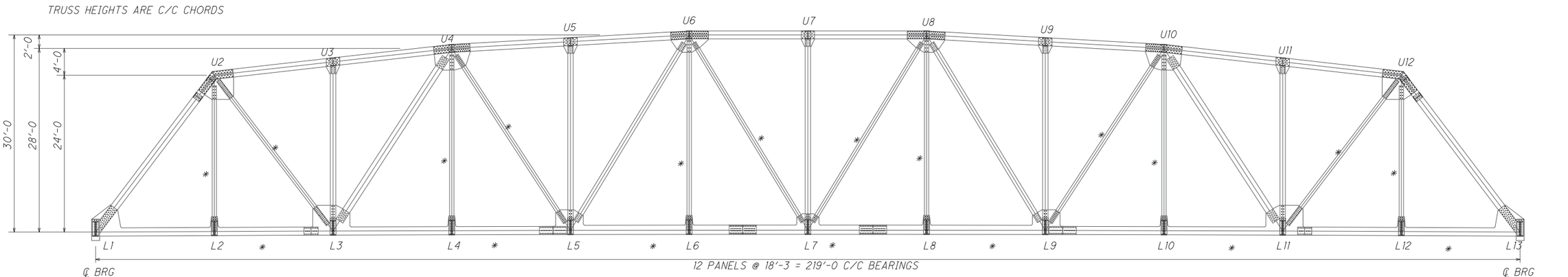
ABUTMENT DETAILS

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08



UPPER FRAMING PLAN



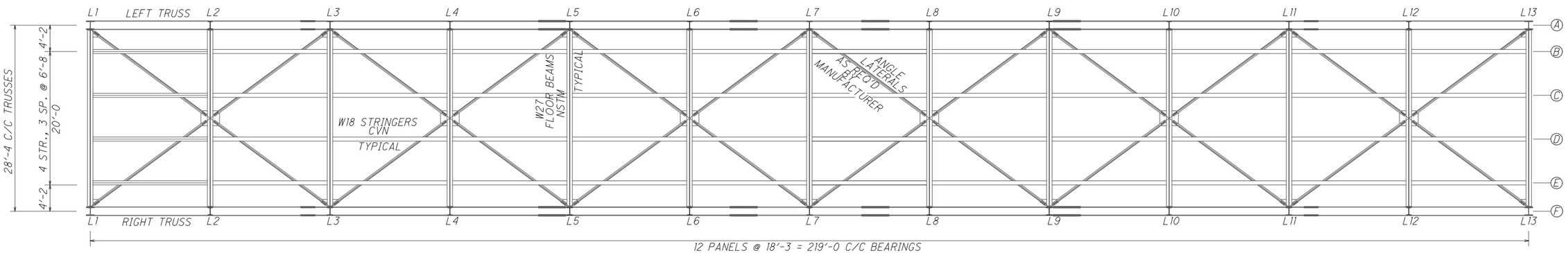
TRUSS ELEVATION

* DESIGNATED MEMBERS THAT UNDERGO AXIAL TENSION FORCES AND ARE CONSIDERED FRACTURE CRITICAL MEMBERS (FCM) FOR FABRICATION PURPOSES

TRUSS VERTICALS, DIAGONALS AND TOP CHORD MEMBERS SHALL BE FABRICATED FROM W14 ROLLED MEMBERS
TRUSS BOTTOM CHORD SHALL BE FABRICATED FROM TWO PLATE MEMBERS

TRUSSES TO BE CAMBERED FOR DEAD LOADS ONLY AND SHALL BE FLAT AFTER ALL DEAD LOADS ARE APPLIED
REQUIRED TRUSS CAMBER TO BE DETERMINED BY TRUSS BRIDGE MANUFACTURER

TRUSSES TO BE DESIGNED TO CLOSELY MATCH THE GEOMETRY OF THE BRIDGE AS DEPICTED ON THESE DETAILS

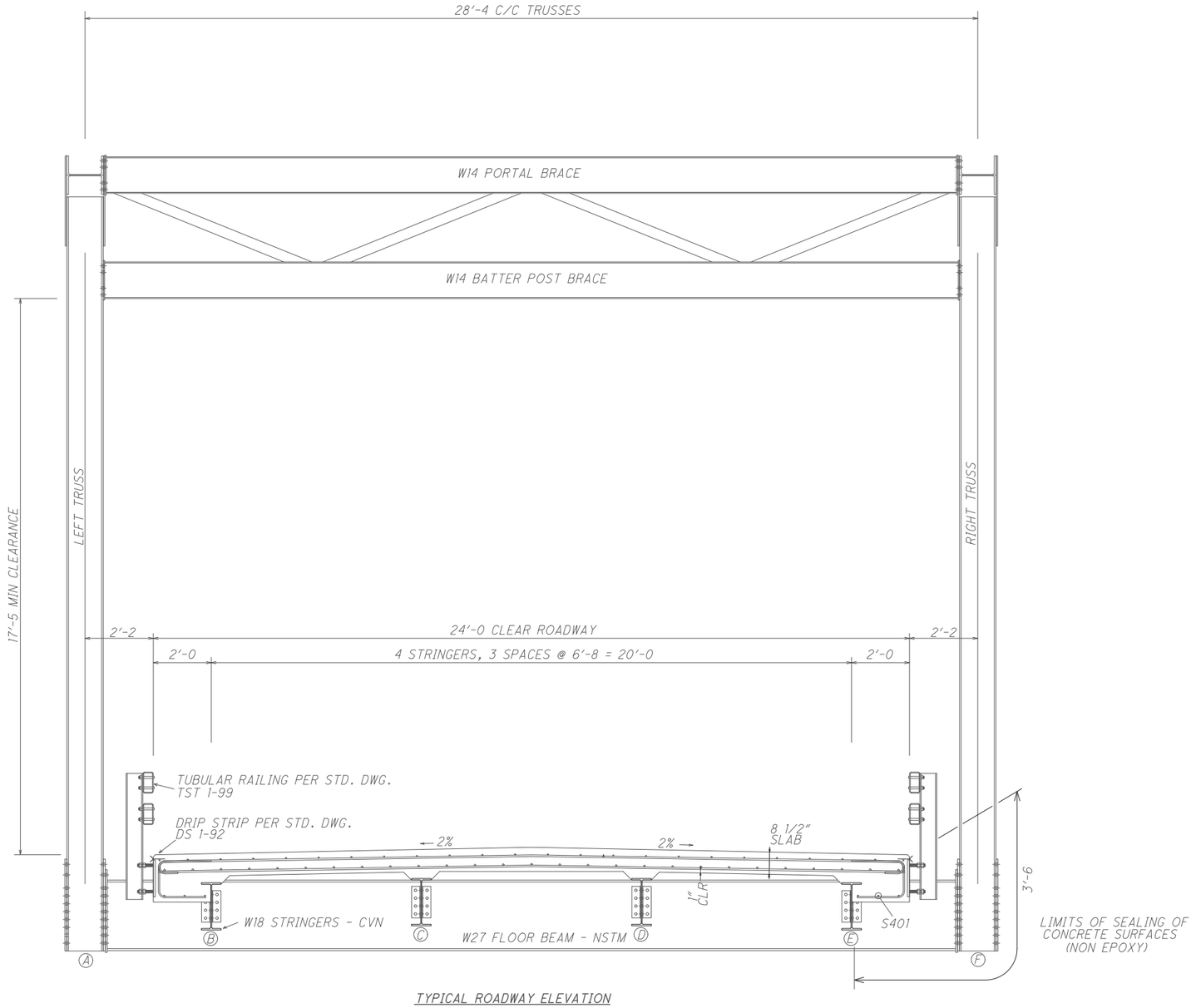


LOWER FRAMING PLAN

CALCULATED JDK
CHECKED FTW

SUPERSTRUCTURE FRAMING PLAN
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08



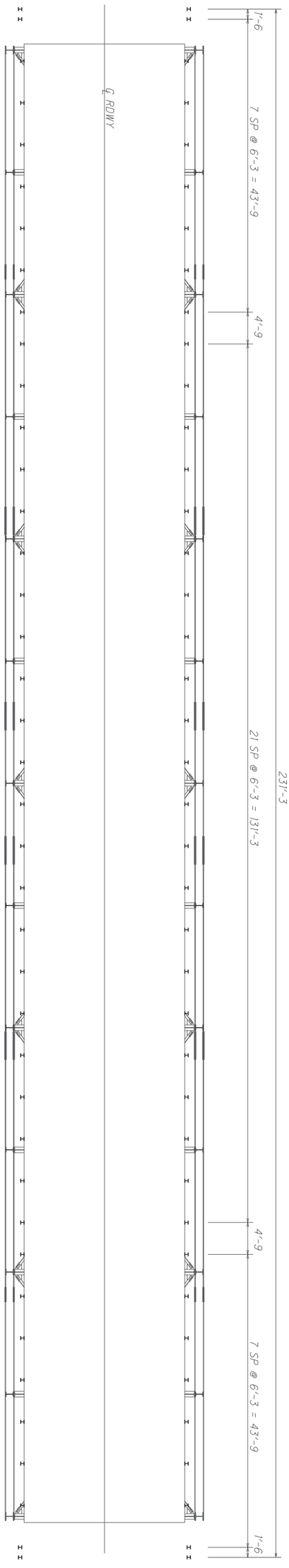
TYPICAL ROADWAY ELEVATION

CALCULATED JDK
CHECKED FTW

SUPERSTRUCTURE ROADWAY SECTION
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

19
26

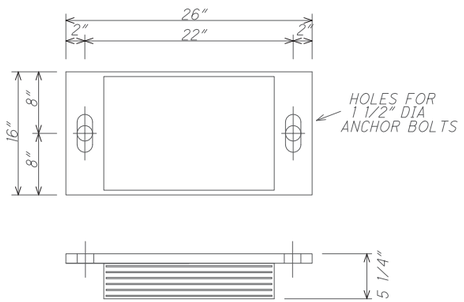


TWIN STEEL TUBE RAILING LAYOUT

NOTE:

1. TST RAILING TO FOLLOW ODOT STD. DWG TST 1-99, 3-19-02 REVISION.

20 26	COS-CR 365-00.08	TWIN STEEL TUBE RAILING LAYOUT BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER	CALCULATED JDK CHECKED FTW



TRUSS BEARINGS

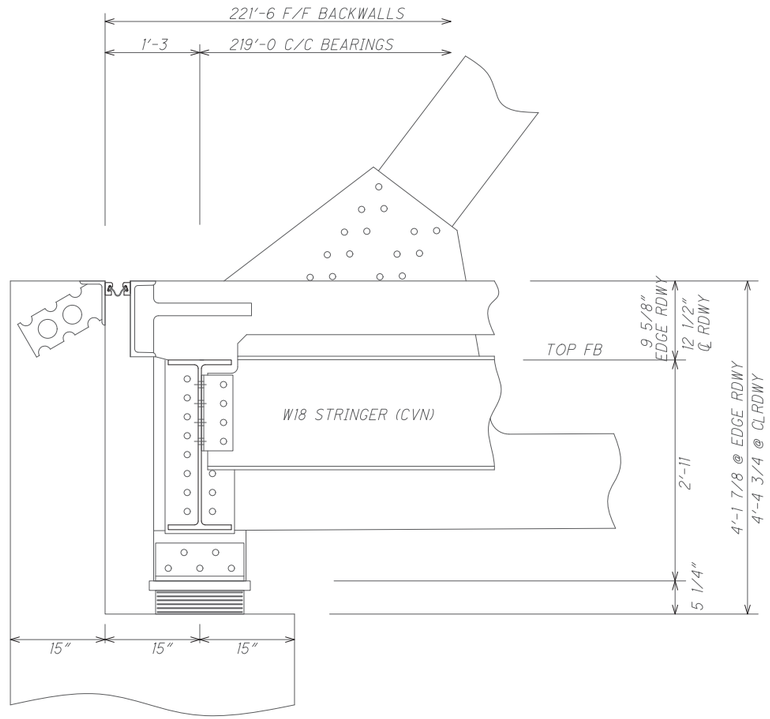
FIXED BEARINGS - REAR ABUTMENT

2 PCS - SOLE PLATE - PL 1 1/2" X 16" X 26" WITH 1 5/8" DIA HOLES
2 PCS - BEARING PAD - 60 DURO - 3 3/4" X 14" X 18"
2 OUTER LAYERS - 1/4"
5 INNER LAYERS - 1/2"
6 SHIM PLATES - 1/8"

EXPANSION BEARINGS - FORWARD ABUTMENT

2 PCS - SOLE PLATE - PL 1 1/2" X 16" X 26" WITH 1 5/8" X 4" SLOTTED HOLES
2 PCS - BEARING PAD - 60 DURO - 3 3/4" X 14" X 18"
2 OUTER LAYERS - 1/4"
5 INNER LAYERS - 1/2"
6 SHIM PLATES - 1/8"

ELASTOMERIC BEARING DESIGN LOADS (KIPS)		
	TRUSS BEARINGS	
	REAR ABUT. (FIX)	FWD. ABUT. (EXP)
DEAD LOAD	366.2	366.2
LIVE LOAD	150.1	150.1



ABUTMENT SECTION

NOTE:

1. STEEL LOAD PLATES SHALL BE ASTM A572GR 50 WITH A GALVANIZED FINISH.
2. ELASTOMERIC BEARINGS SHALL HAVE A HARDNESS OF 60 DUROMETER THE LONG-TERM COMPRESSION PROOF LOAD TEST IS NOT REQUIRED.
3. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION DURING THE MOLDING PROCESS.
4. DUE TO BRIDGE LENGTHENING DURING THE DECK POURING PROCESS, ELASTOMERIC BEARINGS TO BE RESET AFTER DECK POUR.

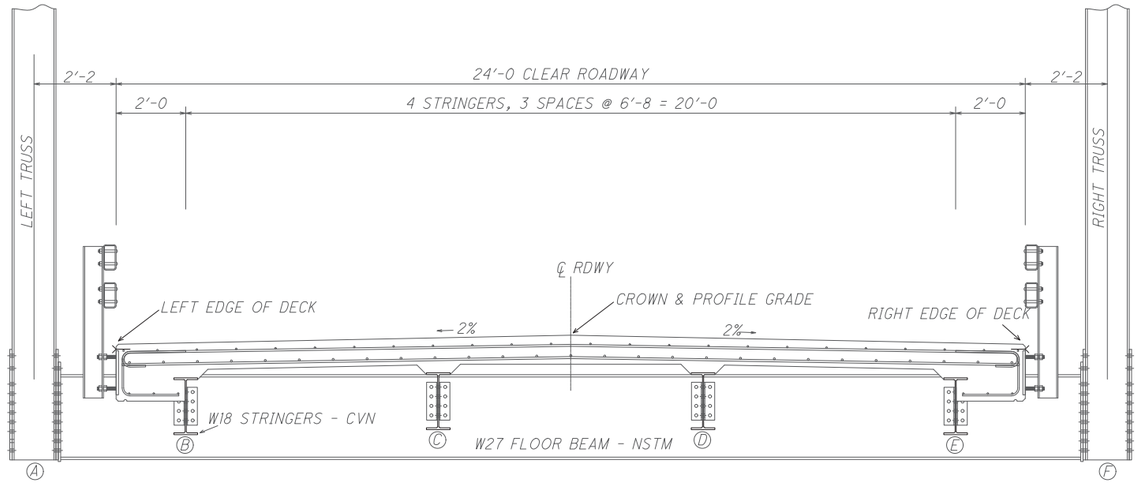
CALCULATED JDK | CHECKED FTW

ABUTMENT SECTION AND BEARINGS
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

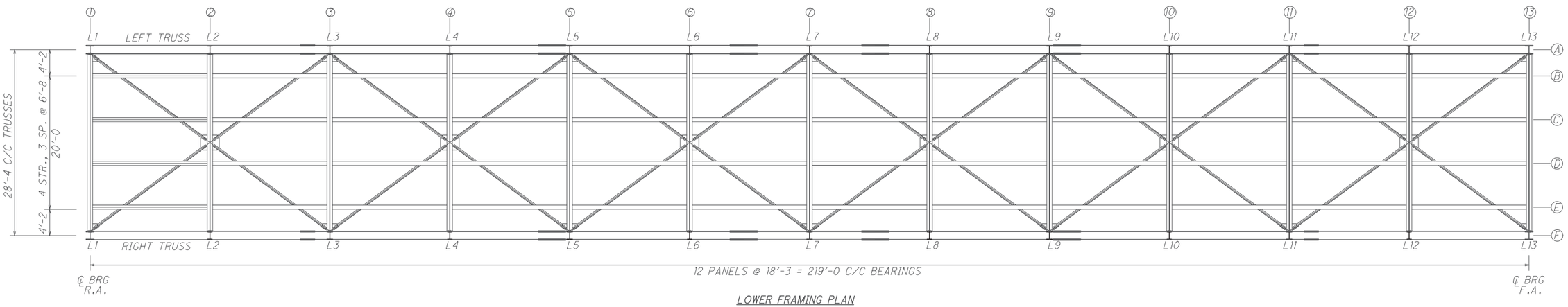
COS-CR 365-00.08

FINAL DECK SURFACE ELEVATIONS (FT)														
LOCATION	DESCRIPTION	℄ BRG R.A. 1	2	3	4	5	6	7	8	9	10	11	12	℄ BRG F.A. 13
	STATION	107+81.64	107+99.89	108+18.14	108+36.39	108+54.64	108+72.89	108+91.14	109+09.39	109+27.64	109+45.89	109+64.14	109+82.39	110+00.64
LEFT EDGE OF DECK	ELEVATION	860.15	860.24	860.33	860.42	860.51	860.61	860.70	860.79	860.88	860.97	861.06	861.15	861.24
CENTER BEAM LINE B	ELEVATION	860.19	860.28	860.37	860.46	860.55	860.65	860.74	860.83	860.92	861.01	861.10	861.19	861.28
CENTER BEAM LINE C	ELEVATION	860.32	860.41	860.50	860.60	860.69	860.78	860.87	860.96	861.05	861.14	861.23	861.33	861.42
CENTER PROFILE GRADE	ELEVATION	860.39	860.48	860.57	860.66	860.75	860.85	860.94	861.03	861.12	861.21	861.30	861.39	861.48
CENTER BEAM LINE D	ELEVATION	860.32	860.41	860.50	860.60	860.69	860.78	860.87	860.96	861.05	861.14	861.23	861.33	861.42
CENTER BEAM LINE E	ELEVATION	860.19	860.28	860.37	860.46	860.55	860.65	860.74	860.83	860.92	861.01	861.10	861.19	861.28
RIGHT EDGE OF DECK	ELEVATION	860.15	860.24	860.33	860.42	860.51	860.61	860.70	860.79	860.88	860.97	861.06	861.15	861.24

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.



TYPICAL ROADWAY ELEVATION



LOWER FRAMING PLAN

CALCULATED JDK
CHECKED FTW

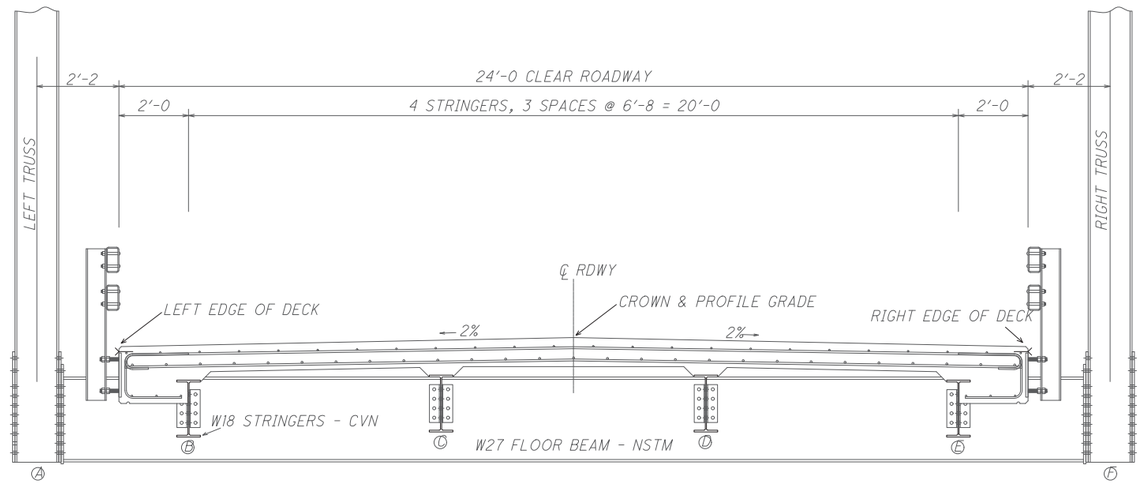
FINAL DECK ELEVATIONS
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

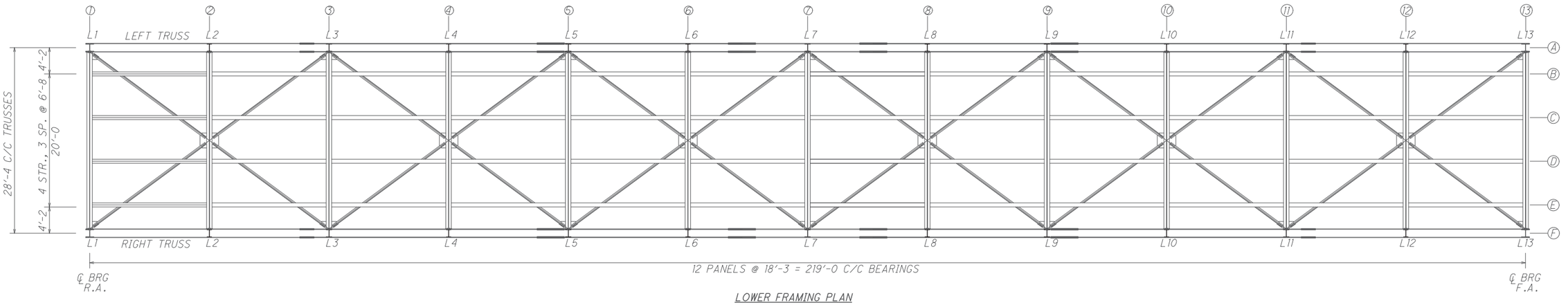
SCREED ELEVATIONS (FT)														
LOCATION	DESCRIPTION	℄ BRG R.A. 1	2	3	4	5	6	7	8	9	10	11	12	℄ BRG F.A. 13
	STATION	107+81.64	107+99.89	108+18.14	108+36.39	108+54.64	108+72.89	108+91.14	109+09.39	109+27.64	109+45.89	109+64.14	109+82.39	110+00.64
LEFT EDGE OF DECK	ELEVATION	860.15	860.29	860.43	860.55	860.67	860.78	860.87	860.96	861.03	861.10	861.16	861.21	861.25
CENTER PROFILE GRADE	ELEVATION	860.40	860.56	860.69	860.81	860.93	861.04	861.13	861.22	861.29	861.36	861.42	861.47	861.51
RIGHT EDGE OF DECK	ELEVATION	860.15	860.29	860.43	860.55	860.67	860.78	860.87	860.96	861.03	861.10	861.16	861.21	861.25

NOTE:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. GIVEN SCREED ELEVATIONS MAY VARY BASED ON BRIDGE MANUFACTURER.



TYPICAL ROADWAY ELEVATION

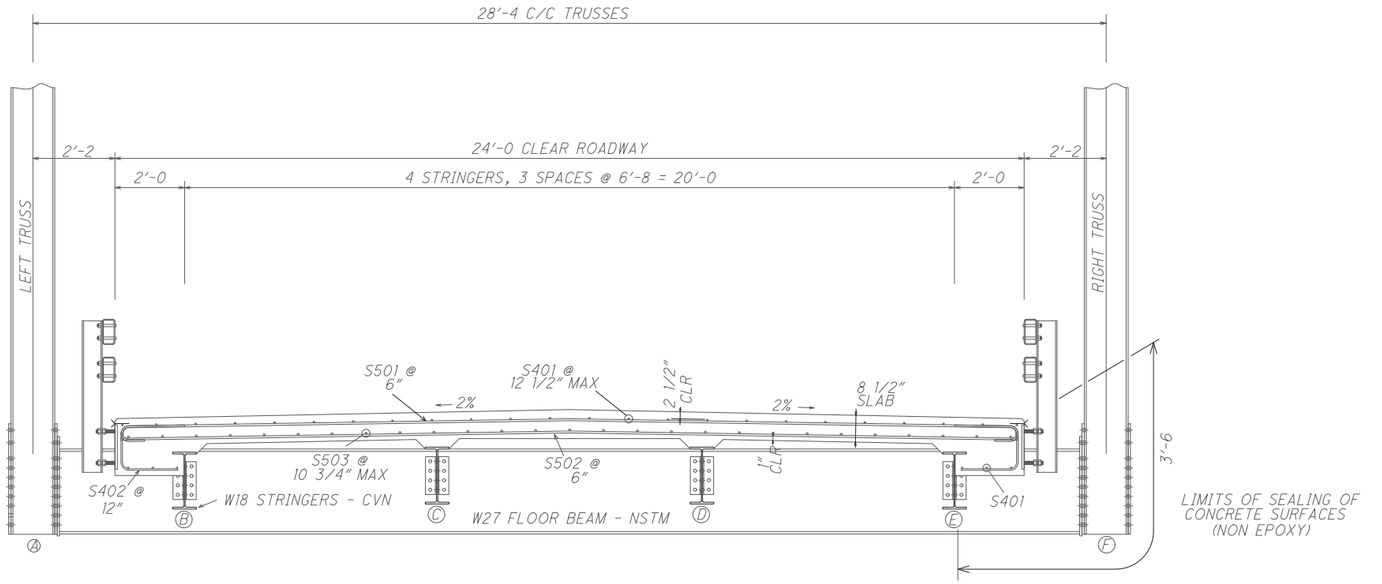


LOWER FRAMING PLAN

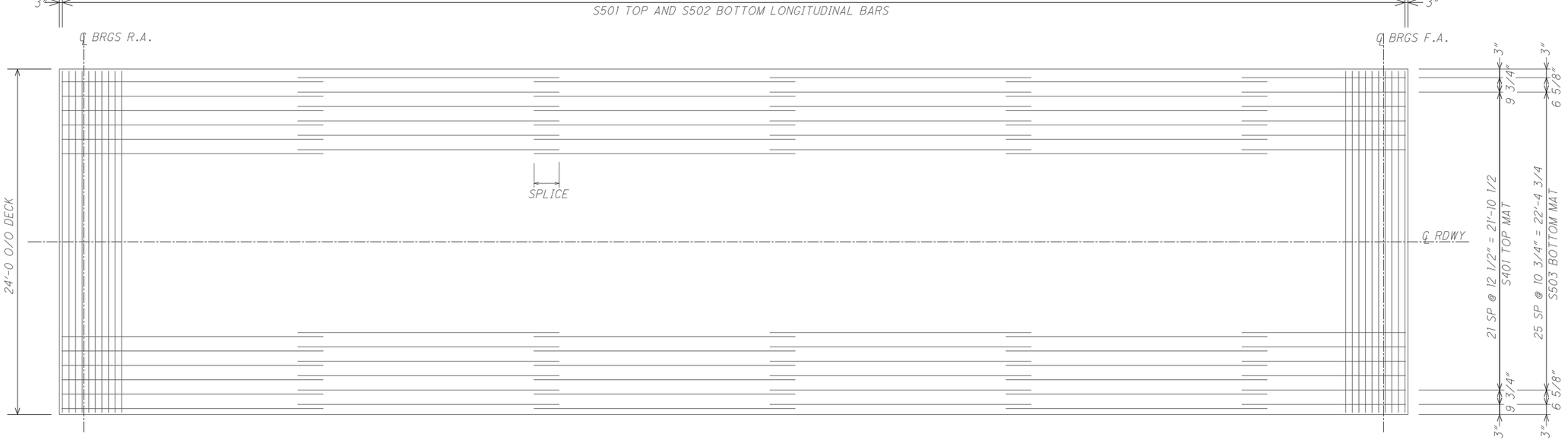
CALCULATED JDK
CHECKED FTW

SCREED ELEVATIONS
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08



TYPICAL ROADWAY ELEVATION



DECK PLAN

*MIN SPLICE LENGTH = S401 TOP BARS - 23"
S503 BOTTOM BARS - 29"

NOTES:

1. CONCRETE FOR DECK SLAB TO BE ODOT TYPE QC2 WITH MIN f'_c =4500 PSI
2. EPOXY COATED REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMIDATE THE CROWN.

CALCULATED JDK
CHECKED FTW

DECK REINFORCING STEEL LAYOUT
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

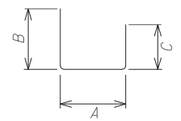
COS-CR 365-00.08

DECK SLAB REINFORCING STEEL LIST

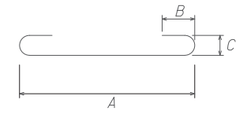
MARK	QTY	LENGTH	TYPE	WEIGHT	BEND DIMENSIONS					SERIES INC.
					A	B	C	D	E	
S401A	150	40'-0	STR	4008						
S401B	30	31'-10	STR	638						
S402	442	4'-3	9	1255	1'-2	1'-8	1'-6			
S501	442	25'-5	8	11717	23'-8	8"	5"			
S502	442	23'-8	STR	10910						
S503A	135	40'-0	STR	5632						
S503B	27	35'-2	STR	990						
	DECK TOTAL			35150 LBS						

S401 – 5 PCS S401A + 1 PC S401B – MIN SPLICE LENGTH IS 27"
S503 – 5 PCS S502A + 1 PC S502B – MIN SPLICE LENGTH IS 35"

BENDING DIAGRAMS



TYPE 9



TYPE 8

NOTES:

1. SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNT.
2. ALL DIMENSIONS ARE OUT TO OUT.
3. TYPE "STR" INDICATED A STRAIGHT BAR.
4. THE BAR SIZE NUMBER IS INDICATED IN THE "MARK" COLUMN. THE FIRST ONE OR TWO DIGITS OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A #5 BAR SIZE.
5. ALL REINFORCING STEEL SHALL BE GRADE 60, EPOXY COATED.

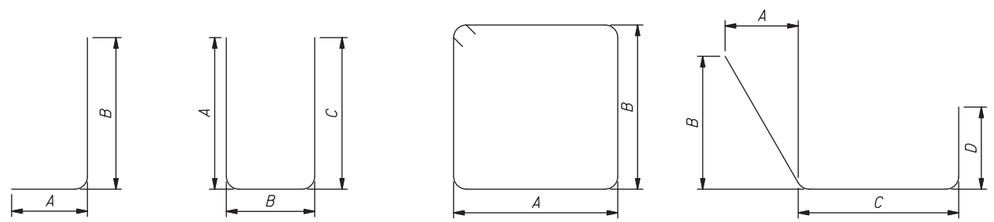
CALCULATED JDK | CHECKED FTW

DECK REINFORCING STEEL LIST
BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A501	6	6	12	31'-0"	388	STR							
A502	6	6	12	33'-0"	413	STR							
A503	21	21	42	11'-10"	518	2	5'-6"	0'-10"	5'-6"				
A504	8	8	16	18'-6"	309	3	1'-6"	7'-7"					
A505	8	8	16	11'-8"	195	2	5'-0"	1'-8"	5'-0"				
A506	16	16	32	5'-10"	188	STR							
A507	12	12	24	5'-10"	146	STR							
A601	17	17	34	20'-0"	1020	3	7'-5"	2'-7"					
A602	21	21	42	21'-10"	1376	3	3'-5"	7'-6"					
A603	8	8	16	14'-6"	348	3	4'-8"	2'-7"					
A801	12	12	24	32'-0"	2051	STR							
A802	5	5	10	31'-0"	828	STR							
A803	18	18	36	5'-10"	561	STR							
				SUB-TOTAL	8,341								

BENDING DIAGRAM



NOTES:

1. ALL REINFORCING STEEL SHALL BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

CALCULATED JDK | CHECKED FTW

ABUTMENT REINFORCING STEEL LIST

BRIDGE NO. COS-CR 365-00.08 OVER MOHICAN RIVER

COS-CR 365-00.08

PROJECT DESCRIPTION

BRIDGE REPLACEMENT AT THE CROSSING OF COUNTY ROAD 365 (C.R. 365) OVER THE MOHICAN RIVER IN TIVERTON TOWNSHIP, COSHOCTON COUNTY, OHIO.

HISTORIC RECORDS

NO HISTORIC GEOTECHNICAL BORING INFORMATION WAS AVAILABLE FOR THIS PROJECT. HOWEVER, HISTORIC PILE TEST RESULTS DATED 1993 BY THE OHIO BRIDGE CORPORATION FOR THE EXISTING PIER FOUNDATIONS WERE AVAILABLE.

GEOLOGY

THE PROJECT AREA IS LOCATED IN THE ALLEGHENY (KANAWHA) PLATEAUS SECTION OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC REGION. THE PROJECT LOCATION IS WITHIN THE MUSKINGUM-PITTSBURGH PLATEAU, WHICH IS CHARACTERIZED BY MODERATELY HIGH TO HIGH RELIEF DISSECTED PLATEAU HAVING BROAD MAJOR VALLEYS THAT CONTAIN OUTWASH TERRACES. THE UNDERLYING BEDROCK CONSISTS OF MISSISSIPPIAN-AGED LIMESTONE FROM THE MAXVILLE LIMESTONE FORMATION OVERLYING INTERBEDDED SHALE AND SANDSTONE FROM THE LOGAN AND CUYAHOGA FORMATIONS. GEOLOGIC MAPPING OF THE AREA INDICATED THAT HE DEPTH TO THE BEDROCK IS VARIABLE AND APPROXIMATELY 70 FEET OR GREATER BELOW EXISTING GRADES. ACCORDING TO THE NRCS WEB SOIL SURVEY OF COSHOCTON COUNTY, OHIO, THE NEAR SURFACE SOILS IN THE PROJECT AREA CONSIST PRIMARILY OF TIOGA FINE SANDY LOAM AND ARE OCCASIONALLY FLOODED.

RECONNAISSANCE

SITE RECONNAISSANCE WAS PERFORMED ON SEPTEMBER 19, 2023. THE PROJECT AREA IS WITHIN A PRIMARILY WOODED RURAL AREA WITH SOME CULTIVATED LAND. THE SURROUNDING AREA IS RELATIVELY HILLY WITH GROUND SURFACE ELEVATIONS OF THE APPROACH PAVEMENT WITHIN APPROXIMATELY 300 FEET FROM THE EXISTING BRIDGE RANGING FROM APPROXIMATELY 850 FEET TO 880 FEET ABOVE MEAN SEA LEVEL (MSL); HOWEVER, THE GROUND ALONG THE EXISTING STREAMBED IS RELATIVELY FLAT WITH BORING GROUND SURFACE ELEVATIONS AT APPROXIMATELY 835 TO 840 FEET ABOVE MSL. THE EXISTING PAVEMENT APPEARED TO BE IN FAIR CONDITION WITH SOME SIGNS OF ISOLATED LONGITUDINAL AND TRANSVERSE CRACKING. THE EXISTING BRIDGE STRUCTURE WAS POSTED WITH A 10 TON LOAD LIMIT. THE ABUTMENTS ARE REINFORCED CONCRETE ON STONE MASONRY AND THE PIER IS SUPPORTED ON H-PILES. ACCORDING TO THE BRIDGE INVENTORY AND APPRAISAL REPORT FROM ODOT'S TIMS WEBSITE THE EXISTING ABUTMENTS ARE SUPPORTED ON SPREAD FOOTINGS ON SOIL AND THE PIERS ARE CAPPED PILES ON STEEL H-PILE FOUNDATIONS. A SHEET PILE WALL IS LOCATED IMMEDIATELY IN FRONT OF THE REAR ABUTMENT. SCOUR WAS OBSERVED ALONG THE SLOPE IN FRONT OF THE FORWARD ABUTMENT WHICH WAS RELATIVELY ABSENT OF CHANNEL PROTECTION. THE EXISTING STREAMBANKS ADJACENT THE BRIDGE ARE SLIGHTLY UNDERCUT FROM STREAM EROSION. THERE IS SIGNIFICANT ACCUMULATION OF DEBRIS (BRUSH AND TIMBER) ON THE UPSTREAM SIDE OF THE EXISTING PIER. THE DEPTH OF THE STREAM BED FROM THE TOP OF THE BRIDGE DECK WAS MEASURED TO BE 27.4 FEET.

SUBSURFACE EXPLORATION

A TOTAL OF 4 STRUCTURE BORINGS WERE PERFORMED BETWEEN SEPTEMBER 26 THROUGH OCTOBER 12, 2023. THE FIELD EXPLORATION CONSISTED OF ABUTMENT BORINGS B-001-0-23 (B-001) AND B-004-0-23 (B-004) LOCATED BEHIND THE EXISTING REAR AND FORWARD ABUTMENT, RESPECTIVELY, AND PIER BORINGS B-002-0-23 (B-002) AND B-003-0-23 (B-003) LOCATED WITHIN THE CHANNEL. BORINGS WERE DRILLED TO DEPTHS BETWEEN 77.5 AND 81.5 FEET. THE BORINGS WERE PERFORMED WITHIN THE EXISTING ROADWAY PAVEMENT AND BRIDGE DECK USING AN ATV MOUNTED ROTARY DRILL RIG. THE HAMMER SYSTEM FOR THE DRILL RIG WAS LAST CALIBRATED ON JUNE 13, 2023 AND HAS A HAMMER EFFICIENCY OF 74.7 PERCENT. THE BORINGS WERE ADVANCED THROUGH THE SOIL OVERBURDEN WITH 3.25-INCH ID HOLLOW-STEM AUGERS (HSA). DISTURBED SOIL SAMPLES WERE OBTAINED WITH A 2-INCH OD SPLIT-BARREL SAMPLER IN GENERAL ACCORDANCE WITH THE STANDARD PENETRATION TEST (SPT) ASTM D-1586 (AASHTO T206) METHODS AT REGULAR INTERVALS OF 5 FEET OR LESS. SIX FEET OF CONTINUOUS SAMPLING WAS PERFORMED BELOW THE ASSUMED PAVEMENT SUBGRADE AND TOP OF SLOPE (TS) ELEVATION/STREAMBED FOR SCOUR SAMPLING PER THE ODOT SGE.

EXPLORATION FINDINGS

THE SUBSURFACE CONDITIONS CONSISTED OF PAVEMENT MATERIALS UNDERLAIN BY NATURAL GRANULAR SOILS WITH LESSER AMOUNTS OF NATURAL COHESIVE SOILS.

AT THE GROUND SURFACE, THE ABUTMENT BORINGS (B-001 AND B-004) ENCOUNTERED 4 INCHES OF ASPHALT PAVEMENT. BENEATH THE PAVEMENT MATERIAL, BORINGS B-001 AND B-004 ENCOUNTERED FILL TO DEPTHS OF APPROXIMATELY 12.0 FEET BELOW THE EXISTING GROUND SURFACE. THE FILL CONSISTED OF MEDIUM STIFF COHESIVE SOIL (A-4a) AND LOOSE TO VERY DENSE GRANULAR SOIL (A-1-b, A-2-4, A-3a) THAT CONTAINS BROKEN GRAVEL INTERMIXED WITH ASPHALT. A SLIGHT TOPSOIL ODOR WAS NOTED IN SAMPLE S-1 FROM BORING B-004 OBTAINED AT A DEPTH OF 1.5 TO 3.0 FEET WITHIN THE FILL. UNDERLYING THE FILL, THE ABUTMENT BORINGS ENCOUNTERED NATURAL SOILS GENERALLY CONSISTING OF MEDIUM STIFF AND LOOSE TO MEDIUM DENSE ALLUVIUM (A-4a AND A-2-4) TO DEPTHS OF 20 TO 22.5 FEET UNDERLAIN BY MEDIUM DENSE TO VERY DENSE GRANULAR SOILS (A-1-a, A-1-b, A-3a) TO THE TERMINATION DEPTH OF THE BORINGS. BORINGS B-002 AND B-003 LOCATED WITHIN THE CHANNEL ENCOUNTERED LOOSE TO VERY LOOSE PEAT SEDIMENT THAT CONTAINED WOOD, SHELLS, AND LARGE BROKEN GRAVEL TO DEPTHS OF APPROXIMATELY 8.5 AND 1.5 FEET BELOW THE STREAMBED, RESPECTIVELY, UNDERLAIN BY MEDIUM DENSE TO VERY DENSE GRANULAR SOILS (A-1-a, A-1-b, A-3a) TO THE TERMINATION DEPTH OF THE BORINGS. DURING DRILLING, OBSERVATIONS OF SAND HEAVE AS WELL AS AUGER CHATTER/SCRAPING/STONE FRAGMENTS INDICATING POSSIBLE COBBLES/BOULDERS WERE NOTED IN ALL FOUR BORINGS AT NUMEROUS DEPTHS.

LEGEND

	DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a	4	46
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	6	10
	GRAVEL &/OR STONE FRAGMENTS WITH SAND & SILT	A-2-4	4	2
	COARSE AND FINE SAND	A-3a	2	3
	SANDY SILT	A-4a	8	6
P	PEAT	PEAT	0	6
		TOTAL	24	73
XXXXX	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		

BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC — INDICATES WATER CONTENT IN PERCENT.

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

X/Y/D" — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D INCHES OF PENETRATION AT REFUSAL.

INDICATES FREE WATER ELEVATION.

INDICATES WATER ELEVATION AFTER DRILLING.

INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.

SS — INDICATES A SPLIT SPOON SAMPLE.

NP — INDICATES A NON-PLASTIC SAMPLE.

EXPLORATION FINDINGS (CONTINUED)

BEDROCK WAS NOT ENCOUNTERED BY ANY OF THE BORINGS PERFORMED FOR THIS EXPLORATION.

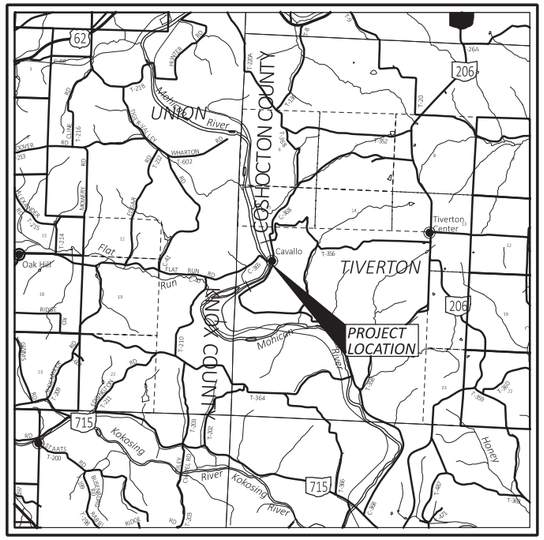
FREE GROUNDWATER WAS OBSERVED DURING DRILLING AT DEPTHS OF 20.0 AND 21.4 FEET IN BORINGS B-001 AND B-004 (APPROXIMATE ELEVATIONS 840.0 AND 841.9, RESPECTIVELY) PRIOR TO ADDING WATER TO THE AUGERS. BORINGS B-002 AND B-003 WERE PERFORMED THROUGH THE BRIDGE DECK AND ENCOUNTERED WATER AT 21.3 AND 22.5 FEET, RESPECTIVELY BELOW THE TOP OF BRIDGE DECK AT THE RESPECTIVE BORING LOCATION.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2024.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

ORGANIC CONTENT BY LOSS ON IGNITION TEST

BORING ID	SAMPLE ID	SAMPLE ELEVATION	SAMPLE DEPTH	LOI (%)
B-002	S-2	832.4' - 830.9'	1.50' - 3.00'	1.7
	S-3	830.9' - 829.4'	3.00' - 4.50'	5.2

RECON. - JC 09/19/23
DRILLING - RM 09/26-28/23
AM 09/26-28/23
KC 10/11-12/23
SH 10/11-12/23
DRAWN - MWJ 07/01-10/24
REVIEWED - JH 07/10/24

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER

DESIGN AGENCY
DLZ

DESIGNER MWJ
REVIEWER JH 07-10-24
PROJECT ID 108777
SUBSET 1 TOTAL 12
SHEET P.0 TOTAL 0

COS-365-0.80

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:16:05 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZC001.dgn

SCOUR SAMPLES						
BORING ID	SAMPLE ID	SAMPLE ELEVATION	D_{50} VALUE (mm)	T_c VALUE (psf)	$D_{50,EQUIV}$ (mm)	EROSION CATEGORY (EC)
B-001	S-6	851.0' - 849.5'	0.200	0.004	0.200	1.362
	S-7	849.5' - 848.0'	0.297	0.006	0.297	1.567
	S-8	848.0' - 846.5'	0.083	0.017	0.827	2.211
	S-9	846.5' - 845.0'	0.128	0.015	0.703	2.211
	S-11	842.5' - 841.0'	0.050	0.025	1.186	2.361
	S-17	825.0' - 823.5'	2.079	0.043	2.079	2.581
B-002	S-1	833.9' - 832.4'	PEAT - ASSUME SEVERELY ERODIBLE			
	S-2	832.4' - 830.9'				
	S-3	830.9' - 829.4'				
	S-4	829.4' - 827.9'				
	S-5	827.9' - 826.4'				
	S-6	823.9' - 822.4'	5.548	0.116	5.548	3.093
	S-7	819.9' - 818.4'	3.442	0.072	3.442	2.844
	S-8	815.9' - 814.4'	2.033	0.042	2.033	2.570
	S-9	811.9' - 810.4'	10.562	0.221	10.562	3.428
	S-14	802.9' - 801.4'	0.916	0.019	0.916	2.154
	S-18	782.9' - 781.4'	4.817	0.101	4.817	3.019
	S-20	772.9' - 771.4'	1.464	0.031	1.464	2.399
B-003	S-1	835.3' - 833.8'	PEAT - ASSUME SEVERELY ERODIBLE			
	S-2	833.8' - 832.3'	1.430	0.030	1.430	2.386
	S-3	832.3' - 830.8'	2.276	0.048	2.276	2.629
	S-5	829.3' - 827.8'	3.247	0.068	3.247	2.814
	S-13	809.3' - 807.8'	0.239	0.005	0.239	1.454
	S-17	789.3' - 787.8'	5.430	0.113	5.430	3.082
	S-21	769.3' - 767.8'	0.585	0.012	0.585	1.920
	S-23	759.3' - 757.8'	3.243	0.068	3.243	2.813
B-004	S-4	857.3' - 855.8'	0.738	0.015	0.738	2.042
	S-5	855.8' - 854.3'	0.086	0.161	7.687	2.754
	S-6	854.3' - 852.8'	2.017	0.042	2.017	2.566
	S-7	852.8' - 851.3'	1.495	0.031	1.495	2.410
	S-8	851.3' - 849.8'	0.043	0.078	3.732	2.632
	S-9	849.8' - 848.3'	0.369	0.008	0.369	1.681
	S-10	847.3' - 845.8'	0.826	0.017	0.826	2.100
	S-11	844.8' - 843.3'	0.369	0.008	0.369	1.681
	S-13	840.8' - 839.3'	4.825	0.101	4.825	3.020
	S-15	835.8' - 834.3'	2.269	0.047	2.269	2.627
	S-23	798.3' - 796.8'	0.523	0.011	0.523	1.862
	S-24	793.3' - 791.8'	3.298	0.069	3.298	2.822

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER

DESIGN AGENCY
DLZ

DESIGNER MWJ
REVIEWER JH 07-10-24
PROJECT ID 108777
SUBSET 2 | TOTAL 12
SHEET P.0 | TOTAL 0

COS-365-0.80

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:16:56 AM USER: mjasiewicz
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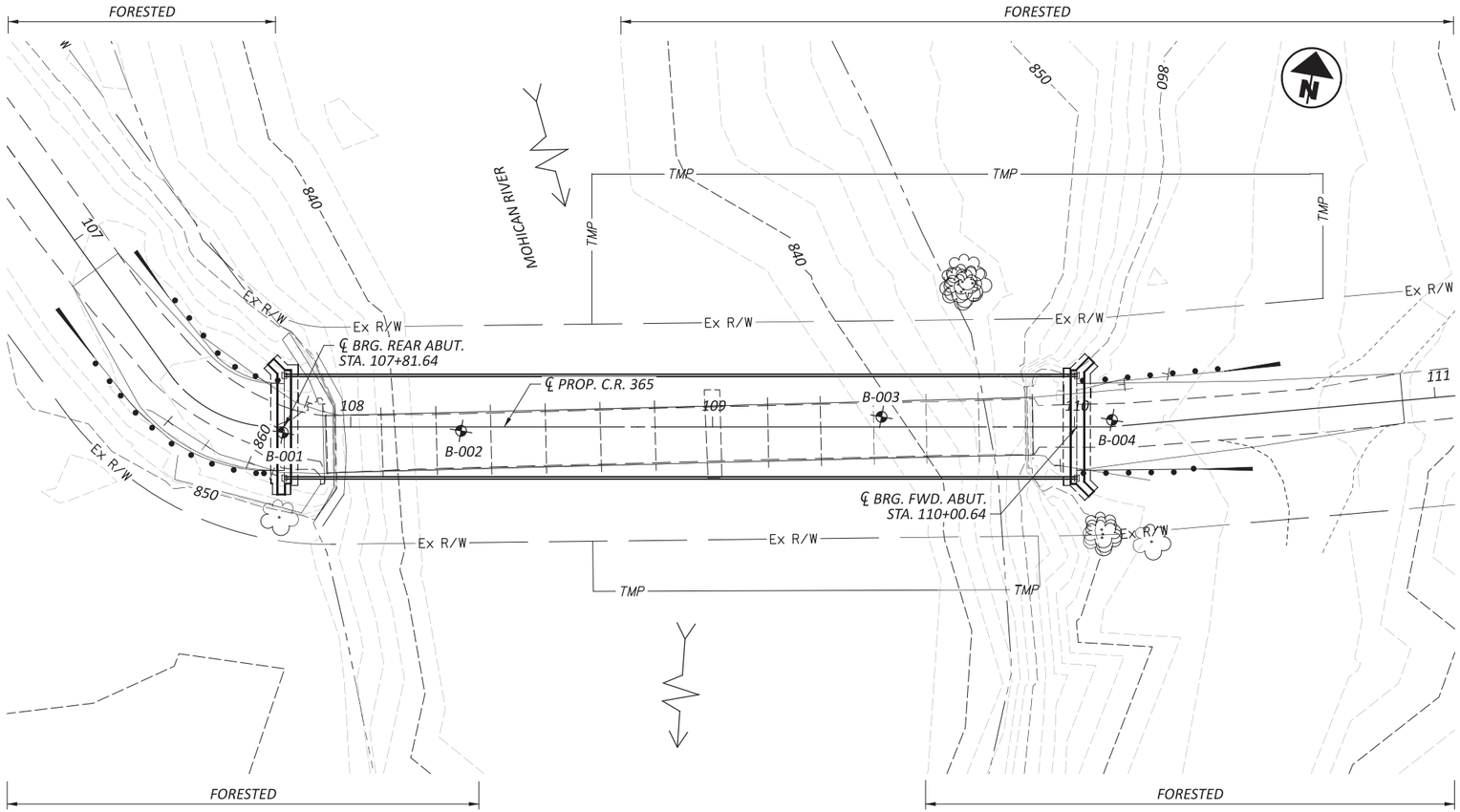

HORIZONTAL SCALE IN FEET
0 10 20 40

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER

DESIGN AGENCY
DLZ

DESIGNER	MWJ
REVIEWER	JH 07-10-24
PROJECT ID	108777
SUBSET / TOTAL	3 / 12
SHEET / TOTAL	P.0 / 0

COS-365-0.80

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:17:51 AM USER: mjasiewicz
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MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:19:38 AM USER: mjasiewicz
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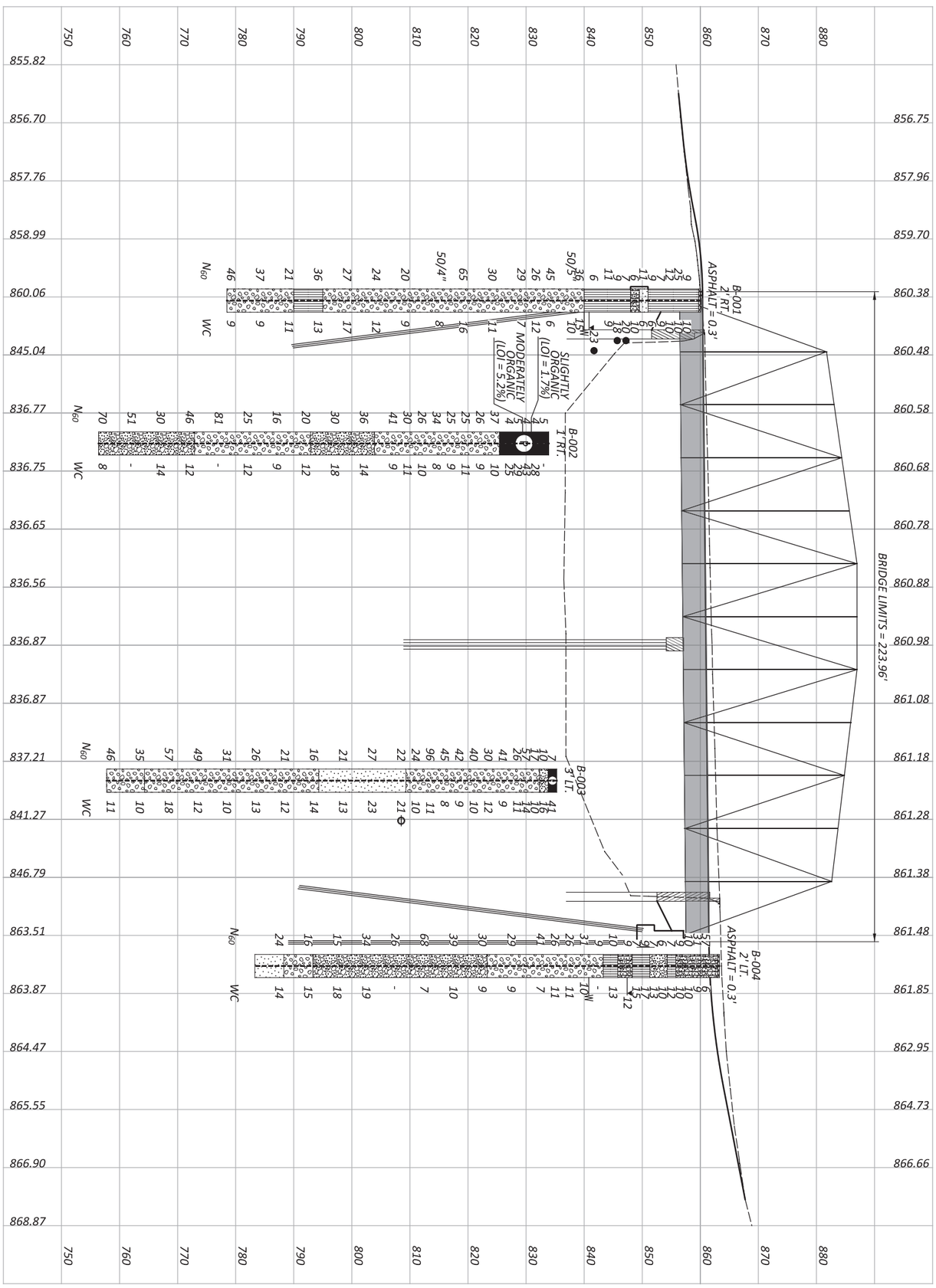

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGNER	DESIGN AGENCY
MWJ	DLZ
REVIEWER	
JH 07-10-24	
PROJECT ID	
108777	
SUBSET	TOTAL
4	12
SHEET	TOTAL
P.0	0

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:21:34 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL001.dgn

PROJECT: COS-CR365-80.00	DRILLING FIRM / OPERATOR: DLZ / RICKY M.	DRILL RIG: '23 CME 55-COL-385	STATION / OFFSET: 107+81, 2' RT.	EXPLORATION ID B-001
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: DLZ / ANDREW M.	HAMMER: CME AUTOMATIC	ALIGNMENT: CR365-CL	
PID: 108777 SFN:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 6/13/23	ELEVATION: 860.0 (MSL) EOB: 81.5 ft.	PAGE 1 OF 2
START: 9/26/22 END: 9/28/23	SAMPLING METHOD: SPT	ENERGY RATIO (%): 74.7	LAT / LONG: 40.412701, -82.179023	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
PAVEMENT AND BASE Asphalt (4")	859.7																	
LOOSE TO MEDIUM DENSE, BROWN, **SANDY SILT**, SOME GRAVEL, DAMP Fill			4 3 4	9	56	S-1	-	18	12	24	33	13	19	15	4	10	A-4a (2)	
			12 11 9	25	44	S-2	-	24	15	24	25	12	19	16	3	10	A-4a (0)	
@4.5'-6.0', contains iron staining			6 6 4	12	56	S-3	-	-	-	-	-	-	-	-	-	10	A-4a (V)	
			4 3 3	7	56	S-4	-	-	-	-	-	-	-	-	-	9	A-4a (V)	
@8.0', light auger chatter and scraping			1 2 5	9	39	S-5	-	-	-	-	-	-	-	-	-	6	A-4a (V)	
	851.0																	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, SOME GRAVEL, DAMP Fill			4 1 8	11	39	S-6	-	23	3	56	13	5	NP	NP	NP	6	A-3a (0)	
@10.0', augers scraping	849.5																	
LOOSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, DAMP Fill	848.0		7 3 2	6	17	S-7	-	38	5	37	18	2	NP	NP	NP	10	A-2-4 (0)	
LOOSE TO MEDIUM DENSE, BROWN, **SANDY SILT**, [INTERBEDDED SILT AND FINE SAND], DAMP			1 2 4	7	72	S-8	-	2	5	46	30	17	23	20	3	20	A-4a (2)	
			3 3 4	9	67	S-9	-	10	14	37	26	13	21	18	3	18	A-4a (1)	
@15.0'-16.5', gravel stuck in spoontip			5 4 5	11	17	S-10	-	-	-	-	-	-	-	-	-	9	A-4a (V)	
@16.0'-18.0', occasional brief light auger chatter																		
			2 2 3	6	39	S-11	-	2	6	36	37	19	24	19	5	23	A-4a (4)	
		▼																
	840.0	W 840.0																
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, CONTAINS COBBLES, WET			3 7 22	36	78	S-12	-	-	-	-	-	-	-	-	-	15	A-1-a (V)	
@22.0', auger chatter and scraping																		
@23.0'-25.0', heavy auger chatter, difficult drilling, 2 feet of gravel & cobbles in augers, tri-coned out			50/5"	-	120	S-13	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
			17 14 22	45	50	S-14	-	-	-	-	-	-	-	-	-	6	A-1-a (V)	
@26.0'-27.5', auger chatter, scraping, and bouncing, difficult drilling																		
@27.5', 1.5 feet of sand heave			13 11 10	26	56	S-15	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
@29.0'-30.0', occaisonal heavy auger chatter																		
@30.0', 2 feet of sand heave			13 9 14	29	-	S-16	-	-	-	-	-	-	-	-	-	7	A-1-a (V)	
@33.0'-35.0', occasional auger chatter and difficulty drilling																		
@35.0', 1.5 feet of sand heave, becoming bronwish gray and gray			12 11 13	30	61	S-17	-	51	29	11	6	3	NP	NP	NP	11	A-1-a (0)	
@37.0'-40.0', auger scraping with occaisonal heavy chatter																		
@40.0'-45.5', 5.5 feet of sand heave, granite stone fragment stuck in spoontip, frequent auger chatter, moderately difficult drilling			13 31 21	65	39	S-18	-	-	-	-	-	-	-	-	-	16	A-1-a (V)	
			50/4"	-	75	S-19	-	-	-	-	-	-	-	-	-	8	A-1-a (V)	
@47.0'-50.0', slight auger chatter and some difficult drilling																		
@50.0', 1 feet of sand heave			10 8 8	20	72	S-20	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
@52.0', auger chatter, occaisonal difficult auger chatter																		
			13 11 8	24	100	S-21	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	DESIGNER	REVIEWER	DESIGN AGENCY
P.0	0	5	12	108777	MWJ	JH 07-10-24	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-001

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:22:52 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL002.dgn

PID: 108777	SFN:	PROJECT: COS-CR365-80.00	STATION / OFFSET: 107+81, 2' RT.	START: 9/26/22	END: 9/28/23	PG 2 OF 2	B-001

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, CONTAINS COBBLES, WET *(continued)* @60.0', 2 feet of sand heave	800.0	61	10 10 12	27	50	S-22	-	-	-	-	-	-	-	-	-	17	A-1-a (V)	
	795.0	62 63 64 65																
DENSE, GRAY, **SANDY SILT**, MOIST		66	10 14 15	36	100	S-23	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
	790.0	67 68 69 70																
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, WET @70.0', 2.5 feet of sand heave @72.0'-74.0', auger chatter and scraping @73.0', 2 feet of sand heave		71	10 9 8	21	83	S-24	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	
		72 73 74 75																
		76	13 18 12	37	-	S-25	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
		77 78 79 80																
@80.0', 1.5 feet of sand heave	778.5	81 EOB	16 19 18	46	100	S-26	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	

NOTES: HOLE CAVED AT 13.6' AFTER PULLING AUGERS. WATER LEVEL MEASURED AFTER 15 HOURS: 18.87'.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: 1 BAG BENSEAL; 0.5 BAGS BENTONITE GROUT; 4 BAGS CEMENT; 12 BAGS GRAVEL; 18 BAGS HOLE PLUG

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	6	12	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-001 (CONTINUED)

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:24:16 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL003.dgn

PROJECT: COS-CR365-80.00
TYPE: BRIDGE
PID: 108777 SFN:
START: 10/12/23 END: 10/12/23

DRILLING FIRM / OPERATOR: DLZ / K.CONRAD
SAMPLING FIRM / LOGGER: DLZ / S. HUZINER
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: '23 CME 55-COL-385
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 6/13/23
ENERGY RATIO (%): 74.7

STATION / OFFSET: 108+30, 1' RT.
ALIGNMENT: CR365-CL
ELEVATION: 833.9 (MSL) EOB: 77.5 ft.
LAT / LONG: 40.412725, -82.178849

EXPLORATION ID B-002
PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
VERY LOOSE, DARK GRAY TO BLACK, **PEAT**, SEDIMENTARY, CONTAINS WOOD, SHELLS, BROKEN COARSE GRAVELS, AND ORGANIC ODOR. BLOW COUNTS POSSIBLE SKEWED BY WOOD AND GRAVEL., WET	833.9	1	1 1 3	5	6	S-1	-	-	-	-	-	-	-	-	-	-	Peat (V)	
		2	2 1 2	4	39	S-2	-	-	-	-	-	-	-	-	-	28	Peat (V)	
@3.0'-4.5', wood lodged in tip of spoon		3 4	2 2 1	4	17	S-3	-	-	-	-	-	-	-	-	-	43	Peat (V)	
		5	2 1 3	5	33	S-4	-	-	-	-	-	-	-	-	-	29	Peat (V)	
		6 7	4 1 2	4	44	S-5	-	-	-	-	-	-	-	-	-	25	Peat (V)	
@8.5', center plug became stuck in augers after removing, there was 6 feet of sand heave, washed out before sampling, rods plugged had to clean out before washing out.	825.4	8																
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, LITTLE SAND, WET		9	6 14 16	37	72	S-6	-	63	16	11	7	3	NP	NP	NP	10	A-1-a (0)	
@10.0', slight auger chatter while advancing		10 11																
		12	29 11 10	26	72	S-7	-	61	21	10	8	-	-	-	-	9	A-1-a (V)	
@12.5', slight auger chatter while advancing		13																
		14 15	16 10 10	25	72	S-8	-	50	28	15	7	-	-	-	-	11	A-1-a (V)	
@15.0', slight auger chatter while advancing		16																
		17	9 10 10	25	61	S-9	-	74	16	6	4	-	-	-	-	9	A-1-a (V)	
		18 19																
			19 14 13	34	67	S-10	-	-	-	-	-	-	-	-	-	8	A-1-a (V)	
		20 21																
		22	12 11 10	26	78	S-11	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
		23 24																
			15 11 13	30	67	S-12	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	
		25 26																
		27	16 17 16	41	50	S-13	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
	803.9	28 29 30																
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, WET		31	13 13 16	36	78	S-14	-	30	39	19	8	4	NP	NP	NP	14	A-1-b (0)	
		32 33 34 35																
@36.0', washout before sampling, 1 feet of sand heave		36 37	6 11 13	30	67	S-15	-	-	-	-	-	-	-	-	-	18	A-1-b (V)	
	792.9	38 39 40																
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, WET @41.0', washout before sampling, 1.5 feet of sand heave		41 42	7 9 7	20	83	S-16	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
@42.5', slight auger chatter while advancing		43 44 45 46																
		47	10 6 7	16	89	S-17	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
@47.5', slight auger chatter while advancing		48 49 50																
@51.0', washout before sampling, 1 feet of sand heave		51 52	4 9 11	25	83	S-18	-	67	23	4	6	-	-	-	-	12	A-1-a (V)	
		53 54 55																
@56.0', washout before sampling, 1 feet of sand heave, becomes very dense		56 57	23 32 33	81	100	S-19	-	-	-	-	-	-	-	-	-	-	A-1-a (V)	
		58 59																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 7/2/24 16:08 - \\DLZCORP.COM\PAN-FILES$\FILES\PROJECTS\2023\2322\120400 EPF COS-CR365-0080\108777\400-ENGINEERING\GEOTECHNICAL\BASEMAPS\GINT\2322-1204.00 E.P. FERRIS COS-CR365-0080 BRIDGE_STICKS.GPJ

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	7	12	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-002

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:25:56 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL004.dgn

PID: 108777	SFN:	PROJECT: COS-CR365-80.00	STATION / OFFSET: 108+30, 1' RT.	START: 10/12/23	END: 10/12/23	PG 2 OF 2	B-002

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
DENSE TO VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, MOIST TO WET @60.0', moderate auger chatter while advancing	773.9 772.9	61 62	13 16 21	46	94	S-20	-	46	20	27	5	2	NP	NP	NP	12	A-1-b (0)	
		63 64 65																
@66.0', becomes medium dense, washout before sampling, 1 feet of sand heave		66 67	7 7 17	30	72	S-21	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
		68 69 70																
@71.0', washout before sampling, 1 feet of sand heave		71 72	10 14 27	51	44	S-22	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	
@72.5', slight auger chatter while advancing		73 74 75																
@76.0', wash out before sampling, 1.5 feet of sand heave	756.4	76 77 EOB	24 23 33	70	39	S-23	-	-	-	-	-	-	-	-	-	8	A-1-b (V)	

NOTES: 3" OF ASPHALT CHIP & SEAL OVER THE STEEL DECKING. 21.3' TO WATER FROM BRIDGE DECK, 25.4' TO STREAMBED FROM BRIDGE DECK.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: FILL NATURALLY

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	8	12	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-002 (CONTINUED)

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:27:54 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL005.dgn

PROJECT: COS-CR365-80.00
TYPE: BRIDGE
PID: 108777 SFN:
START: 10/11/23 END: 10/11/23

DRILLING FIRM / OPERATOR: DLZ / K.CONRAD
SAMPLING FIRM / LOGGER: DLZ / S. HUZINER
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: '23 CME 55-COL-385
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 6/13/23
ENERGY RATIO (%): 74.7

STATION / OFFSET: 109+47, 3' LT.
ALIGNMENT: CR365-CL
ELEVATION: 835.3 (MSL) EOB: 77.5 ft.
LAT / LONG: 40.412789, -82.178440

EXPLORATION ID B-003
PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV. 835.3	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
LOOSE, DARK GRAY TO BLACK, **PEAT**, SEDIMENTARY, CONTAINS WOOD, SHELLS, AND LARGE BROKEN GRAVEL, LARGE GRAVEL CHUNCK STUCK IN TIP OF SPOON, SLIGHT AUGER CHATTER WHILE ADVANCING, WET	833.8	1	1 2 4	7	39	S-1	-	-	-	-	-	-	-	-	-	41	Peat (V)	
MEDIUM DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, LARGE GRAVEL CHUNCK STUCK IN TIP OF SPOON, SLIGHT AUGER CHATTER WHILE ADVANCING, WET	832.3	2	8 4 4	10	67	S-2	-	43	30	20	4	3	NP	NP	NP	16	A-1-b (0)	
MEDIUM DENSE TO DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, WET		4	11 7 7	17	67	S-3	-	53	26	11	6	4	NP	NP	NP	10	A-1-a (0)	
@3.0'-12.5', slight auger chatter while advancing		5	20 23 23	57	39	S-4	-	-	-	-	-	-	-	-	-	14	A-1-a (V)	
		7	5 8 13	26	72	S-5	-	61	22	8	6	3	NP	NP	NP	11	A-1-a (0)	
		9	12 16 17	41	78	S-6	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
		12	17 11 13	30	78	S-7	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
		14	5 14 18	40	72	S-8	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
		17	13 17 17	42	83	S-9	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
		19	14 18 18	45	72	S-10	-	-	-	-	-	-	-	-	-	8	A-1-a (V)	
@20.0', moderate auger chatter while advancing																		
@21.0', very dense, drove on possible cobbble		22	21 41 36	96	22	S-11	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	
@23.5', washout before sampling, 4 feet of sand heave		24	7 10 9	24	50	S-12	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
	809.3																	
MEDIUM DENSE, BROWN, **COARSE AND FINE SAND**, LITTLE GRAVEL, WET @26.0', washout before sampling, 2 feet of sand heave		27	5 8 10	22	33	S-13	-	17	14	55	10	4	NP	NP	NP	21	A-3a (0)	
@31.0', washout before sampling, 3 feet of sand heave		32	9 12 10	27	61	S-14	-	-	-	-	-	-	-	-	-	23	A-3a (V)	
@36.0', washout before sampling, 1.5 feet of sand heave		37	7 7 10	21	67	S-15	-	-	-	-	-	-	-	-	-	13	A-3a (V)	
@37.5', slight auger chatter while advancing	794.3																	
DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, WET		42	10 8 5	16	39	S-16	-	-	-	-	-	-	-	-	-	14	A-1-a (V)	
@41.0', washout before sampling 1 feet of sand heave																		
@46.0', washout before sampling 1 feet of sand heave		47	10 7 10	21	89	S-17	-	67	18	7	-	8 -	-	-	-	12	A-1-a (V)	
@51.0', washout before sampling, 1 feet of sand heave		52	7 11 10	26	100	S-18	-	-	-	-	-	-	-	-	-	13	A-1-a (V)	
		57	12 9 16	31	89	S-19	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	

SHEET P.0 | TOTAL 0
SUBSET 9 | TOTAL 12
PROJECT ID 108777
REVIEWER JH 07-10-24
DESIGNER MWJ
DESIGN AGENCY DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-003

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:29:43 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL006.dgn

PID: 108777 | SFN: | PROJECT: COS-CR365-80.00 | STATION / OFFSET: 109+47, 3' LT. | START: 10/11/23 | END: 10/11/23 | PG 2 OF 2 | B-003

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	ABAN-DONED
DENSE, BROWN AND GRAY, **GRAVEL AND STONE FRAGMENTS**, SOME SAND, WET *(continued)*	775.3																	
@61.0', washout before sampling		61	17 19 20	49	89	S-20	-	-	-	-	-	-	-	-	-	12	A-1-a (V)	
		62																
		63																
		64																
		65																
@66.0', 1 feet of sand heave		66	16 21 25	57	83	S-21	-	13	46	35	0	6	NP	NP	NP	18	A-1-b (0)	
		67																
		68																
		69																
		70																
DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS**, WET	764.3	71	14 14 14	35	50	S-22	-	-	-	-	-	-	-	-	-	10	A-1-a (V)	
@72.5', large chunk gravel stuck in tip of spoon, slight to moderate chatter while advancing		72																
		73																
		74																
		75																
@76.0', washout before sampling, 1 feet of sand heave		76	23 18 19	46	100	S-23	-	76	18	3	-	3	-	-	-	11	A-1-a (V)	
	757.8	77 EOB																

NOTES: 3" OF ASPHALT CHIP & SEAL OVER THE STEEL DECKING. DIDN'T GROUT, LET BROING FILL NATURALLY. 22.5' WATER LEVEL FROM BRIDGE DECK. 27.1' TO STREAMBED FROM BRIDGE
ABANDONMENT METHODS, MATERIALS, QUANTITIES: FILL NATURALLY

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 7/2/24 16:08 - \\DLZCORP.COM\PAN-FILES$\FILES\PROJECTS\2023\2322\120400 EPF COS-CR365-0080\108777\400-ENGINEERING\GEOTECHNICAL\BASEMAPS\GINT\2322-1204.00 E.P. FERRIS COS-CR365-0080 BRIDGE_STICKS.GPJ

SHEET	TOTAL	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	10	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-003 (CONTINUED)

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:31:22 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL007.dgn

PROJECT: COS-CR365-80.00
TYPE: BRIDGE
PID: 108777 SFN:
START: 9/28/23 END: 9/29/23

DRILLING FIRM / OPERATOR: DLZ / RICKY M.
SAMPLING FIRM / LOGGER: DLZ / ANDREW M.
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: '23 CME 55-COL-385
HAMMER: CME AUTOMATIC
CALIBRATION DATE: 6/13/23
ENERGY RATIO (%): 74.7

STATION / OFFSET: 110+11, 2' LT.
ALIGNMENT: CR365-CL
ELEVATION: 863.3 (MSL) EOB: 80.0 ft.
LAT / LONG: 40.412816, -82.178214

EXPLORATION ID B-004
PAGE 1 OF 2

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
Asphalt (4")	863.0																	
VERY DENSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, CONTAINS BROKEN GRAVEL INTERMIXED WITH ASPHALT AND SLIGHT TOPSOIL ODOR, DAMP Fill			7 35 11	57	100	S-1	-	-	-	-	-	-	-	-	-	6	A-2-4 (V)	
@3.0', auger chatter			15 11 14	31	100	S-2	-	38	14	16	21	11	20	16	4	9	A-2-4 (0)	
@4.5', auger scraping, becomes very loose			7 5 3	10	83	S-3	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
	855.8		3 3 4	9	28	S-4	-	40	15	16	19	10	21	16	5	10	A-2-4 (0)	
STIFF, BROWN, **SANDY SILT**, DAMP Fill	854.3		3 3 3	7	72	S-5	1.75	10	23	18	34	15	24	16	8	12	A-4a (3)	
LOOSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND**, DAMP TO MOIST Fill			3 3 2	6	28	S-6	-	50	13	15	12	10	22	16	6	10	A-1-b (0)	
	851.3		3 3 3	7	22	S-7	-	47	16	14	14	9	23	20	3	13	A-1-b (0)	
MEDIUM STIFF, BROWN, **SANDY SILT**, DAMP @12.0', occasional brief auger chatter			3 5 2	9	67	S-8	0.75	20	9	12	42	17	25	18	7	17	A-4a (5)	
	848.3		4 2 4	7	50	S-9	0.00	37	12	9	28	14	24	16	8	15	A-4a (1)	
LOOSE, BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT**, CONTAINS ORGANIC ODOR, DAMP		▼	4 3 4	9	44	S-10	-	41	15	12	20	12	25	18	7	12	A-2-4 (0)	
	845.8																	
LOOSE, GRAY, **SANDY SILT**, CONTAINS ORGANIC ODOR, DAMP			5 3 5	10	11	S-11	-	-	-	-	-	-	-	-	-	13	A-4a (V)	
	843.3																	
MEDIUM DENSE TO DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS**, WET			7 4 3	9	33	S-12	-	-	-	-	-	-	-	-	-	-	A-1-a (V)	
		W 840.8																
			11 12 13	31	33	S-13	-	58	24	11	-	7 -	-	-	-	10	A-1-a (V)	
			14 13 8	26	28	S-14	-	-	-	-	-	-	-	-	-	11	A-1-a (V)	
@27.5', some auger chatter, 1.5 feet of sand heave, washed out			12 11 10	26	89	S-15	-	53	27	11	-	9 -	-	-	-	11	A-1-a (V)	
			14 15 18	41	28	S-16	-	-	-	-	-	-	-	-	-	7	A-1-a (V)	
@32.0', light auger chatter																		
			14 11 12	29	78	S-17	-	-	-	-	-	-	-	-	-	9	A-1-a (V)	
@37.0', light auger chatter																		
@38.5', light auger chatter and scraping	823.3																	
DENSE TO VERY DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, WET			12 12 12	30	83	S-18	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	
@43.0', light auger chatter and scraping																		
			11 14 17	39	100	S-19	-	-	-	-	-	-	-	-	-	10	A-1-b (V)	
@48.5', auger chatter and scraping																		
@50.0', moderate auger chatter, 1.5 feet of sand heave, washed out			20 27 28	68	100	S-20	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
@55.0', auger chatter, 1.5 feet of sand heave, washed out			8 10 11	26	72	S-21	-	-	-	-	-	-	-	-	-	-	A-1-b (V)	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 7/2/24 16:09 - \\DLZCORP.COM\PAN-FILES$\FILES\PROJECTS\2023\2322\120400 EPF COS-CR365-0080\108777\400-ENGINEERING\GEOTECHNICAL\BASEMAPS\GINT\2322-1204.00 E.P. FERRIS COS-CR365-0080 BRIDGE_STICKS.GPJ

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	11	12	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-004

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/11/2024 TIME: 11:33:35 AM USER: mjasiewicz
X:\Projects\2023\2322\120400 EPF COS-CR365-0080\108777\400-Engineering\Geotechnical\Sheets\108777_ZL008.dgn

PID: 108777	SFN:	PROJECT: COS-CR365-80.00	STATION / OFFSET: 110+11, 2' LT.	START: 9/28/23	END: 9/29/23	PG 2 OF 2	B-004

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
DENSE TO VERY DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS WITH SAND**, WET *(continued)*	803.3	61	11 14 13	34	100	S-22	-	-	-	-	-	-	-	-	-	19	A-1-b (V)	
@60.0', 2 feet of sand heave, washed out		62																
		63																
@64.0', auger chatter		64																
		65																
		66	9 2 10	15	89	S-23	-	14	45	34	-	7 -	-	-	-	18	A-1-b (V)	
@66.5', auger chatter, washed out		67																
		68																
		69																
	793.3	70																
MEDIUM DENSE, GRAY, **GRAVEL AND STONE FRAGMENTS**, WET		71	8 6 7	16	100	S-24	-	63	20	7	-	10 -	-	-	-	15	A-1-a (V)	
		72																
		73																
		74																
	788.3	75																
MEDIUM DENSE, GRAY, **COARSE AND FINE SAND**, WET		76	13 8 11	24	100	S-25	-	-	-	-	-	-	-	-	-	14	A-3a (V)	
		77																
		78																
		79																
	783.3	EOB 80																

NOTES: AUGERED TO 79.5', BUT AUGERS KICKED OFF TO THE SIDE SOMEWHERE BETWEEN 20'-30' AND COULDN'T GET SAMPLER TO BOTTOM OF HOLE FOR LAST SAMPLE.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: COLD PATCHED 3 BAGS BENSEAL; 6 BAGS GRAVEL

SHEET	TOTAL	SUBSET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.0	0	12	12	108777	JH 07-10-24	MWJ	DLZ

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. COS-CR365-0080 OVER MOHICAN RIVER
BORING LOG B-004 (CONTINUED)